INTRODUCTION

TO

INSURANCE

BY

LAURENCE E. FALLS

INTRODUCTION TO INSURANCE

By

LAURENCE E. FALLS, F. I. I. A.

An outline of the social function, the economic value, and the mechanism of the business of insurance, including a condensed history of insurance, and some of its counterparts during the last 3,000 years.

Published by

INSURANCE INSTITUTE OF AMERICA, INC.
80 JOHN STREET
NEW YORK 7, N. Y.

First Printing November, 1949
Second Printing November, 1950

Printed in the United States of America by
Beaverbrooke Printing Co., Inc.

Foreword

THIS VOLUME is intended to provide an outline of a business that affects all other businesses and that touches the lives of nearly every individual. It has been prepared primarily for workers who have recently entered the business and for those who have been longer employed but without opportunity to learn the scope and function of the business as a whole. Readers from outside the business may be interested to see how much their activities are influenced by insurance.

Nearly six hundred thousand people are employed in the United States alone by insurance companies and agencies. Some of these employees never become aware of the importance of their work in providing freedom from uncertainty. The security furnished by insurance has helped to promote success for individuals and for the Nation. It has made possible the extension of credit which is necessary under the free enterprise system upon which the United States of America has been built.

There is a reason why each operation in the insurance mechanism is necessary to conduct the business successfully. Almost any worker will perform his task better if he knows what it is all about. The point is illustrated in the old story of the railroad employee, who, for fifty years, tapped with a hammer on every car wheel on each incoming train. When asked why he did that, he replied, "I haven't the least idea. I just tap every wheel. That's my job." He hadn't been told that his work was important and that, if he discovered a cracked wheel, he might save many lives.

—THE AUTHOR

July, 1949

CONTENTS

Page

FOREWORD 3

CHAPTER I—THE QUALIFIED ADVISOR 9

Who is interested in insurance—What the public should know about it—Dependence upon insurance—Who is competent to give counsel.

CHAPTER II—HISTORY OF INSURANCE 13

Origin of and reasons for insurance—Communal funds—Forms of insurance among ancient peoples in: Babylon, Rhodes, Italy, Syria, and England—Early laws which are followed today—Relation between history and modern practice in insurance—Why insurance is not gambling.

CHAPTER III—PRINCIPLES OF INSURANCE 21

The lessons in historical events—Guilding principles and their origins—Theory of Probability and the Law of Average—Insurable interest—Indemnity—Mutuality—Coinsurance.

CHAPTER IV—MORAL HAZARD 27

Connotation in insurance—The intangible factor in selection of risks—Rates for moral hazard—Discrimination prohibited—Rejection or cancellation for moral hazard.

Page

CHAPTER V—KINDS OF INSURANCE AND INSURANCE CARRIERS 29

Regulation of company writing powers—Major divisions and kinds of risks included in each—Subjects of insurance—Risk carrying organizations—Individual underwriters—Reciprocal exchanges—Mutual companies—Lloyds—Capital stock companies.

CHAPTER VI—FIRE INSURANCE 35

Insurance mechanism in operation—Creation of insurable interests—The local agent's services—How much insurance to carry—How fire insurance rates are made—Home office fire insurance underwriting—The daily report—Statistical records—The adjustment and payment of a fire loss—Subrogation—Unearned premium reserves.

CHAPTER VII—CASUALTY INSURANCE 44

Physical damage and third party liability—Analysis of industrial plant exposure to loss—Kinds of insurance needed—An automobile accident—Investigation and adjustment of claims.

CHAPTER VIII—MARINE INSURANCE 51

Our foreign trade—Dependence upon marine insurance protection—Perils of the seas—The value of a ship and cargo—General and particular average—Disbursements—Ocean and lake time clauses—Implied and express warranties—Valued forms—Commercial set—Ship surveyors—Protection and indemnity insurance—Simple examples of marine loss adjustments.

Page

CHAPTER IX—INLAND MARINE INSURANCE 61

Development of recent times—Floating values and movable properties—Risks in transit—Instrumentalities of transportation—Inland Marine definition—Committee on Interpretation and Complaint—List of inland marine policies.

CHAPTER X—SURETYSHIP AND FIDELITY BONDS 65

Form of credit guarantee, not strictly insurance—Parties to a bond-principal, obligee and obligor—Corporate surety vs. personal surety—Investigation expense—Contractors, lost securities, license and release libel bonds—Judicial, public official, and court bonds—Employees fidelity bonds.

CHAPTER XI—LIFE INSURANCE 68

Individual underwriters—Mutual and stock companies—Function of capital in life, casualty and property insurance—Certainty of loss and insured's accumulative interest—Rating factors—The reserve.

CHAPTER XII—INSURANCE SURVEY FOR INDIVIDUALS 73

How many kinds of insurance does one need—How to find out.

CHAPTER XIII—BINDERS 77

Policy as written record of contract—Meeting of minds—Oral and written binders—Life insurance—Losses under binders—Reinsurance binders.

Page

CHAPTER XIV—LOSS PREVENTION 79

Rates affected by losses—Fire insurance rate reduction in 35 years —Ignorance and carelessness—What is bought with the premium dollar—Media for educating the public—Accident prevention—Safety standards—Public health—Organizations promoting loss prevention.

CHAPTER XV—FEDERAL & STATE REGULATION & SUPERVISION 82

Periodic examinations—Annual statements—Diversity in policy provisions before regulation—History of state laws and insurance departments—State jurisdiction over rates—Paul vs. Virginia decision—S. E. U. A. decision—The McCarran Act—All industry bills—Insurance as interstate commerce—The Jones Act—Rating and underwriting organizations—Separation in agencies—State taxes.

CHAPTER XVI—INVESTMENTS & INVESTMENT INCOME 87

Legally restricted—Security and yield—Dividend policy—Market quotations on capital stock—Sources and use of earnings.

CHAPTER XVII—MULTIPLE LINE UNDERWRITING POWERS 91

Former limitations by laws—State statutes recently broadened—Public demand for "packaged insurance"—Foreign expansion by American business—Powers of insurance companies abroad—No compulsion in permissive laws—Need for more comprehensive knowledge of business.

CHAPTER I

The Qualified Adviser

In the United States all businesses, mercantile, manufacturing, and financial; the professions; and nearly all families and individuals, are directly concerned with insurance in some or all of its forms. It is one of the largest businesses in this country: Americans spend more than ten billions of dollars a year for insurance. Because it is a highly technical business, the body of policyholders cannot hope, nor do they wish, to understand all of the calculations and operations which are necessary to the performance of the insurance function. Much less have they the time or the facilities to acquaint themselves with the voluminous laws and court decisions by which the insurance business is regulated. Yet it is desirable that the buyer of insurance have a general knowledge of the terms of the contract for which he has paid a premium and upon which he will rely for indemnity if he sustains a loss — a loss which might impose upon him a crushing financial burden if not recoverable from insurance.

There are no policies that insure against all loss in every circumstance and, therefore, the policy owner should know how much insurance he carries and what property is covered against which perils. He may take certain business risks or refrain therefrom, depending upon how much he can rely upon his insurance for indemnification of losses. Many ventures would not be undertaken if insurance were not available to protect the investment against the perils to which property is subject.

As head of a family a policy owner leans upon life insurance to care for his wife and to educate his children in the event of his premature death. His savings, invested in a home, cannot be wiped out by fire or windstorm, lightning or explosion, nor can his net estate be taken from him because of a judgment for personal injury caused by his automobile—provided he is adequately insured.

And so insurance is interwoven with every activity of his life,

yet he rarely knows any more about it than that he carries the kinds that an agent or broker or other insurance counselor has advised him to buy. The average citizen trusts the business to sell him the protection which he should have. Fortunately the administrators of the business today recognize that their first responsibility is to safeguard the interests of the public. There is a growing realization by those who counsel the public that insurance advisers must have a thorough knowledge of the business in all its forms.

There are two parties to an insurance contract, the company and the insured. Few policyholders, when they buy insurance, deal directly with the other party to the contract, which is the insurance company. The company is usually represented by an agent while the insured may authorize a broker to represent him and to deal with the company or its agent.

The prospective insured has property or other interests to be protected against certain risks or perils. The insurance companies sell policies at rates and subject to conditions which are the result of long experience in such matters, or which are dictated by Federal or State laws. In the distribution of insurance indemnity contracts it is the province of the agents and brokers to know the needs of the prospective policy buyers and the facilities which insurance companies offer to supply those needs. Unless the agent or broker knows the full circumstances surrounding the interest to be insured, and also knows in what manner and by which insurance company this interest may be protected, he is not qualified to perform his part in the transaction.

Counsel on insurance matters is usually given to the public by agents and brokers, but the several hundred thousand men and women employed in various capacities in the head offices and departments of insurance companies frequently are asked to advise friends and acquaintances about a premium rate, a loss adjustment, or a matter of policy language. When an insurance accountant is appealed to as an insurance expert, he may have an understandable urge to answer the question asked, but he should realize that his

friend may rely upon the answer, and may be injured by it if that answer is incorrect.

Insurance is a complex business employing the skill of doctors, lawyers, engineers, actuaries, builders, transportation experts, accountants, and underwriters especially trained in each branch of the business, yet it is not necessary that the qualified insurance counselor become an expert in any of the professional fields provided he knows the reasons for their contributions to the end product, which is protection for his client.

In classes where the principles of insurance and suretyship are taught, instructors frequently find the students to be impatient with the history of the various forms of insurance. Sometimes this comes out in the question, "How soon do I begin to learn something that I can use to get a better job in the office where I work?" The rules of operation which make insurance possible have resulted from the study of past occurrences which have been recorded and analyzed and then reduced to formulae which guide the underwriter in every decision which he makes. These results of the study of the history of insurance we call "Principles." They fall into five broad classifications, and every insurance transaction, to succeed, must observe all five of these tenets. Our second and third chapters will trace that history and the development of those five principles.

The insurance business has a language all its own. Some of the terms which are peculiar to insurance will be used, with explanations, because the agent, the broker, and the company employee can deal together more surely and promptly if the same language is spoken and understood by all of them.

A knowledge of "why" certain things are done in the insurance business is often the key to "how" insurance can be written with benefit to all concerned. We will, therefore, consider why insurance performs such an important function in the economy of our people, and next how it is done.

Some of the differences between practices in foreign countries and

those in the United States will be briefly noted, but this introduction deals primarily with methods used in this country. As the title implies, it is not intended to be an exhaustive treatise on the subject, nor on any one branch of the business.

CHAPTER II

History of Insurance

THE BUSINESS of insurance is not only one of the largest in the world. It is also one of the oldest. The principles and even some of the methods in use long before the Christian era are employed by successful insurance companies today. The Rhodians and the Romans; the Chinese and the people of India; and later the Normans, Germans, and English, developed schemes for pooling their common danger of loss by the perils of robbery, theft, fire, and the perils of the seas.

Fear of loss and uncertainty of the consequences were the impelling reasons for the earliest organized plans to accomplish what we now do by insurance. When a man's house burned, his neighbors usually offered their labor to build him another house, but, unless he was able to supply the materials, this assistance availed him nothing. Robbers and thieves stole cattle, work animals, and the tools with which men earned a living for their families, and no man knew when this disaster would come to him. Since time out of mind men had banded together for protection against wild animals, marauders and enemy tribes, so it was natural that they made common cause of their danger from other perils, and organized to share the loss which any one of their number might suffer through fire or robbery or other mishap. Every member of the group contributed to a fund out of which the loss of the unfortunate member was met. This is the essence of insurance. The methods which were used may now seem crude, but they were based upon a fundamental principle which has not changed. The important thing about those early schemes is found in the lessons which we have learned from study of their operation—lessons which are followed today by the insurance business.

Joseph taught the Egyptians to lay aside a portion of their grain in the years of good crops to insure them against hunger in the lean

years that were to follow. Fifteen centuries before Christ the Syrians established communal funds for calamities, such as fire and drought, by empowering their judges, priests, and magistrates to collect levies, or taxes, from each member of the community, and to accumulate these funds against the occurrence of disaster. They followed the principle upon which mutual insurance companies and some state funds are now operated. In our country there is no compulsion to participate in mutual insurance companies, but contribution to certain governmental insurance plans is enforceable at law, as it was more than three thousand years ago.

There are many recorded plans of associations, societies, and guilds of trades craftsmen showing how they set aside part of the dues paid by the members to establish reserves for losses of their members, through fire and robbery, and for the expense of a decent burial. Mostly these community funds were set up and maintained by groups among the working classes, such as the Collegia Tenuiorum in the Roman Empire, and the guilds which flourished throughout Europe and England from Anglo-Saxon times through the Middle Ages. The rules of the Guild at Chesterfield, Derbyshire, about 1218 A. D. stated that help should be given to a member in case of loss by fire, robbery or other mishap "provided such loss came not through his own lust, or gluttony, or dice play, or other folly." Here we find a mutual insurance plan with an exclusion against loss by "vice proper" similar to the exclusion appearing in modern policies.

One of the oldest writings which fixed the legal responsibility for loss by perils which are now covered by insurance is the Code of Hammurabi, King of Babylon, about 2000 B. C. This code is inscribed on a basalt column which once stood in the Temple of Marduk, and most of its provisions are still legible. Under sections 101, 102, and 103 a trader carrying merchandise advanced on loan was made wholly free of his debt if the goods were lost by robbery. The lender took the risk of thieves and robbers. In consequence, a high rate of interest was charged on such loans. This was parallel

to — it may be the origin of — a contract for sea transport, later known as "respondentia bond," which was in general use until late in the nineteenth century. If these many lenders, or borrowers, had pooled their common exposure to loss by robbery, as they were later to do through insurance, such high interest rates would not have been necessary.

It was usual in those early times for several merchants with their wares to take passage on the same ship, trading from port to port. In a heavy storm at sea the master of the vessel had authority to decide which cargo should be thrown overboard to lighten the load, but many arguments arose as to who should bear this loss, which was a sacrifice for the good of all. One such argument was laid before the Emperor of Rhodes for adjustment. Ten merchants with their various kinds of trade goods had taken passage in a ship to trade in the ports along the Mediterranean coast, and one of the merchants had taken aboard a flock of sheep, which were carried on the top deck. The vessel was caught in a storm and, as it rolled from side to side, the sheep rushed first to the port rail, and then to the starboard rail, whichever was lower for a time. This shift of weight so added to the peril of the ship that the captain ordered the sheep thrown overboard, or "jettisoned." The Emperor was asked to decide who should pay for the loss of the sheep. He ruled that, since the destruction of the sheep had been a sacrifice for the benefit of all interests aboard the vessel, all those interests: ship, anticipated freight, and the value of all the cargoes including the sheep should each contribute its pro rata share of the loss. That rule, written into their code of law by the Rhodians in 916 B. C., is now called "General Average" and is part of present maritime practice. It is also the basis for "Coinsurance" used in other kinds of insurance as will be explained and illustrated in the chapter on Principles of Insurance and Suretyship.

Marine insurance, partly because it insured the largest single exposures to total loss, developed faster than other forms. Probably the idea and many of the practices of Marine insurance were intro-

duced into England by the "Lombards," Italians from the Province of Lombardy, who were sent over by the Pope to promote the interests of the Catholic Church. They were the money lenders of Europe in the 13th Century and their coat-of-arms, three gilt balls, is still the sign of a pawnbroker. Among the safeguards with which the Lombards surrounded their loans was a system of insurance by individual underwriters, much like the later operation of Lloyd's.

It continued to be the custom of ship owners and the owners of cargoes to borrow money to finance their ventures and to pledge their ships and cargoes as security, or collateral, for the repayment of the loan. Following the practice of centuries it was agreed that the loan would be repaid when the vessel completed its voyage, but, if the vessel were lost at sea, the debt was cancelled. Pledge of the vessel was called a "Bottomry Bond," and pledge of cargo, a "Respondentia Bond." The rate of interest was high, as it had been for the same risk in the days of King Hammurabi, but the net cost of this hazard could now be reduced for the individual by carrying marine insurance.

From 1696, most of the progress made in marine insurance for at least a century, and much of it since that time, is the history of "Lloyd's-London." This is not a company, but an association of individual insurance underwriters. It grew out of the meetings of navigators, ship owners, and merchants in Lloyd's Coffee House in Pope's Head Alley, in London, where news of the sea was exchanged, and reports were circulated upon the safe arrival or loss of vessels. These men formed groups to share each other's ventures, whereas heretofore each one had borne all of the risk of a voyage, taking all of the profit or suffering all of the loss. The writing by which they recorded this sharing agreement was called a "policy" and the participants who signed their names at the bottom of the agreement were known as "underwriters." One of the old meanings of the word "policy" is "written record of a gambling bet or wager." Some of these early agreements made at Lloyd's Coffee House were really gambling upon things not connected with shipping, such as the date

of the death of some prominent person. In 1769 some of the underwriters at Lloyd's established a formal organization which operates today as it did when it was started, except that gambling contracts are no longer issued. Unless the policy buyer has a financial interest in the risk to be insured, Lloyd's will not undertake it. Another lesson had been learned by experience, i.e., insurance is gambling unless the policy buyer has an insurable interest.

The great fire in 1666 nearly wiped out the city of London. In the following year, while this disaster was fresh in the minds of the people, one Nicholas Barbon opened an office in London to insure buildings against loss by fire. This man, who had been christened with the astonishing name of "Christ-died-on-the-Cross-that-thou-mightst-not-be-damned Barebones," had, under his adopted name, tried various other schemes which had failed, but this one prospered. At first only buildings were insured. One rate was charged for brick or stone construction and a higher rate for frame or wooden buildings. The amount of the policy was based upon the rental value of the property and not upon the actual cash value as we now write fire insurance. It was several years before the underwriters would insure contents of buildings.

Prior to 1720 all insurance had been written by individuals whose private fortunes were the only money guarantee that claims would be paid in the event of loss. In that year the King, George I, granted charters to two corporations to write insurance: the London Assurance Corporation and the Royal Exchange Assurance Corporation. These grants were "exclusive only of all other Corporations and Societies for insuring ships and merchandise, under proper restrictions and regulations." The right of individual underwriters to issue such insurance continued as before. Later in the year in which these two corporations began business the South Sea Bubble burst. Panic reigned in England. Investors lost some 500 millions of pounds, sterling, which was about twice the value of all the land in England. All corporations, however sound and honourable, were attacked by the public, but these two insurance companies were

able to survive, principally because of the known integrity of the members of their Courts of Directors.

Fire insurance in the United States began with the formation of a mutual company in Charlestown, South Carolina, in 1735, and many such companies were formed in the next one hundred years, including one organized in Philadelphia by Benjamin Franklin. The Green Tree Mutual Insurance Company was formed especially to write fire insurance on dwelling houses surrounded by shade trees, which other companies considered too hazardous. Capital stock companies did not enter the field until late in the eighteenth century when the Commonwealth of Pennsylvania granted a charter to The Insurance Company of North America in 1794, and one to The Insurance Company of the State of Pennsylvania four days later. Prior to 1835 most of all fire insurance in this country was carried in mutual companies, some of which had too much liability in large centers, like New York City, where there was a congestion of highly valued properties. In that year a conflagration in New York destroyed some seven hundred buildings, causing the failure of many mutual companies. Since that date capital stock companies have written a majority of all fire insurance in America, although there are many strong mutual companies, particularly those which insure large manufacturing plants equipped with automatic sprinkler systems. The great fires of 1835 in New York and 1871 in Chicago demonstrated the need for spread of risk in the fire insurance business.

Ancient peoples held life much more cheaply than they valued property and possessions. The Hanseatic League and some of the Guilds in Europe and England used part of the membership dues for burial expenses and some of the Guilds made regular payments to the dependent families of the deceased, but we find little history of what we call life insurance prior to the nineteenth century, A. D. The Presbyterian Synods in New York and Philadelphia set up a corporation in 1759 to insure the lives of ministers for the protection of their families, which was the first life insurance company in the

United States. The Insurance Company of North America issued five or six life insurance policies after incorporation but it voluntarily discontinued this business in 1804. The large American life insurance companies were organized between 1842 and 1870, and their growth was so rapid that by 1947 the largest corporation in the United States was the Metropolitan Life Insurance Company.

The nineteenth century was an age of mechanical invention and industrial growth. A larger proportion of the population congregated in cities. The first skyscraper in the world was the Home Insurance building, erected in Chicago in 1884. It was twelve stories high and equipped with passenger elevators, the first of which had been installed in New York City in 1859. By 1904 the height of steel frame buildings had been increased to twenty-three stories, and the erection and operation of buildings with elevators had created new hazards to life and limb. Machinery of various kinds came into general use in factories, in homes, and on the highways, performing tasks formerly done by hand or by animals.

The liability of building owners and factory operators for injuries sustained by workmen and the public created a demand for insurance against financial losses from damage suits. Between 1851 and 1890 sixteen companies were formed to write liability insurance of various kinds, including, in most cases, employers' liability for industrial accidents. In 1900 the production of automobiles in the United States had reached 5000 cars a year and the demand was growing for automobile liability insurance. This has now become the largest premium producing class for most casualty insurance companies.

Early in this century workman's compensation laws were passed in several of the states and such a law has now been adopted by every state. These laws provide that when a workman is injured in the course of his employment the employer must pay to him a fixed percentage of his regular wage during the time that the injury keeps him from working. Most employers carry insurance to cover the liability imposed by these laws.

Protection and Indemnity insurance which, briefly, covers ship owner's liability for injury to employees or to the public and for damage to the property of others, began in England about 1880. It is still written extensively by mutual clubs in England and by one group of mutual and one group of capital stock companies in the United States.

Suretyship, like insurance, was a pledge by individuals in its earliest forms. Many citizens came to grief through pledging their fortunes to guarantee the honesty of, or performance of a contract by, their friends or relatives. Even the Bible warns against going surety for another. Business found that this is a risk that can be better carried by a corporation, and this prompted the organization of surety companies. These corporations make careful and impersonal investigations of the people whose honesty and fidelity they guarantee. Contractors whose bonds they sign must show good characters and reasonable ability to perform the work which the bond covers. Corporate surety has become a necessity for American business although it began in the United States only seventy-three years ago.

We shall now examine the lessons which history has taught to the business of insurance and see how these lessons have been used to form the groundwork for sound underwriting judgment, without which there would be no successful insurance companies.

CHAPTER III

Principles of Insurance

WHENEVER IN the history of mankind large numbers of people have come to live in one community they have found that they must learn to live together. The responsibilities of each individual to his neighbor and to the community are social problems, and the means by which the group solves these problems are social devices. Insurance is a social device under which the many share the misfortunes of the few. The principles which must be followed to make this device work successfully may be separated into five general divisions, as follows:

1 — Theory of Probability and Law of Average
2 — Insurable Interest
3 — Indemnity
4 — Mutuality
5 — Coinsurance

Law of Average

In Paris, during the reign of Louis XIV, two Spanish nobles were playing a game called "points." Each had wagered thirty-two pistoles that he would win three points before his opponent won three. They were obliged to stop their game when player "A" had two points and player "B" had only one. Because of the prominence of the players their friends asked Pascal, the famous philosopher and mathematician of that time, to decide how the sixty-four pistoles should be divided between the players. This is the solution which Pascal gave them:

> If one more hand were played either "A" or "B" would win it. If "A" won he would then have three points and would win the sixty-four pistoles. If "B" won the point he would have two points, the same as "A", and the total stake would be divided equally between them. In either event "A" would retain his wager and his pistoles are, therefore, not at stake. "A" and "B"

should each receive one-half of the thirty-two pistoles wagered by "B" as each would have had an equal chance to win them. "A" should, therefore, receive forty-eight pistoles and "B" should receive sixteen.

This theory was later much elaborated and furnished the world with the Theory of Probabilities.

If a man plays one game of solitaire of the variety called "Canfield," he may build all fifty-two cards on the four aces, but the probability is that he will do it only fifty-five times in every thousand games. If he owns one house, it will burn or it will not, but if he owns fifty thousand houses the probability is that three of them will be totally destroyed by fire in one year and 997 will be partly burned. Of course, this probability changes from time to time as it is affected by construction and fire protection. By accumulating the experience of years we arrive at the number of times a thing has happened, which gives us a dependable measure of what is going to happen. This is called the Law of Average or sometimes the Law of Large Numbers.

The man with one house cannot afford to take the chance that his one house will burn, but an insurance company taking the chance on fifty thousand houses may safely assume how many of them will burn each year, and figure the rate for that risk accordingly. Not even a life insurance company knows how long a certain man will live, but the Mortality Tables, resulting from years of recorded experience, show how many men out of every one hundred thousand of a given age will die in one year.

Thus an insurance company deals in so many risks of the same kind at one time that the law of average removes much of the element of chance. *Spread of risk and average of risk* are both necessary to permit the law of large numbers to operate. When an insurance company carries 10,000 risks of one class, each insured for $5,000, it has both spread and average. If, however, it adds one policy for $50,000, it maintains spread of risk but has distorted the

average. One of the risks, which by the law of average will become a claim in any one year, may be the one with $50,000 of liability.

Insurable Interest

History has taught us that Lloyd's Underwriters, in the early days of that organization, found that some of their members were gambling by writing policies upon the probable date of death of some prominent person although the policyholder (the insured) would not suffer a financial loss by such death. Policies were also being issued against the happening of other events in which the policyholder had no money interest. Certain underwriters saw the advantages of insurance for its value to society, and they foresaw that gambling would endanger respect for the business, and might even give it a bad reputation. The policyholder, in such cases, did not have an "insurable interest" in the occurrence insured against. Such a policy is unlawful because it is against the public interest. Unless the occurrence against which insurance is purchased will cause the insured an actual financial loss, he does not have an insurable interest. The relationship between the amount of loss which he may suffer; the amount of insurance to be carried; and the amount of claim to be paid, is partly governed by the third cardinal principle.

Principle of Indemnity

To be fully repaid, but not overpaid, for the loss which he has suffered when he has an insurable interest, the policy owner must not receive from insurance a larger amount than it takes to cover his actual out-of-pocket loss. If his house is worth $10,000, he can lose only that amount if it burns, even though he carries fire insurance for $20,000. He will be fully "indemnified" by receiving $10,000 and he should not be permitted to gamble at odds of, say, one to one hundred that the house will burn. Further, it would be unfair to other policyholders and to the insurance company because he might be tempted to set fire to the house to get the extra $10,000. The amount of insurance carried and the payment

for a claim for loss should never be more than the sum which will make the assured whole for the loss which he has suffered.

Suppose that the house, in the above instance, will cost $12,000 to rebuild, at the prices for labor and new materials at the time of the loss. If it has been used for eight years it has depreciated about sixteen percent. The owner has had $2,000 worth of use of the property which he can not lose by the occurrence of a fire. A fur coat that cost $1,000 two years ago may cost $1,200 to replace today. If the value of the coat has been half used up by wear the owner can lose only $600 if the coat is destroyed. Conversely, if the replacement cost is only $800, the owner has only $400 of value remaining.

Mutuality

Insurance, as we have learned, is a social device through which many citizens join together to distribute the cost of a calamity which may befall only a few of them, but by which all of them are endangered. All the policyholders and the insurance companies have a common interest in seeing that no one artificially hastens the occurrence of an accident or takes an unfair advantage of the security which he would not enjoy if his neighbors had not joined with him to finance that security. Both before and after the loss the assured and the company have a mutual interest to prevent an increase in the chance of loss, and the amount of damage, by delay or carelessness. The policyholder must take all reasonable precautions, just as if he had no insurance.

Coinsurance

When the Rhodians wrote their code law in 916 B. C., to regulate distribution of losses between ship and cargo and anticipated freight earnings, they established the principle of Coinsurance, viz., that all of the value at risk should contribute its share of the total premiums out of which loss is to be paid for any part of that value. Coinsurance is one of the principles upon which the successful operation of insurance depends. Its purpose is to distribute loss and premium cost equitably among policyholders.

In New York City, years ago, a maid dropped a coal oil lamp on the floor in the entrance hall of a "brownstone front," one of the old mansions which contained thirty rooms. The resultant fire was confined to that one room, but it caused fifty thousand dollars in damage to paintings, rugs, and furniture. There was fifty thousand dollars of value in each of a dozen other rooms in the dwelling, and yet only fifty thousand dollars of fire insurance, without a coinsurance clause, was carried on the entire building contents. The owner had insured more than thirteen exposures to loss for the premium on one exposure only.

The word "Coinsurance" accurately describes the contract provision under which the assured and the company agree to "coinsure," or insure together, a certain value against loss by a named peril. As his part of the agreement, the policyholder must have in force at the time of loss the percentage of insurance to value, which he agreed to maintain, in order to collect the full amount of his loss up to the face of the policy. If the assured keeps only a part of his agreement, he collects only a part of his loss.

The following example will illustrate how this agreement operates:

Value of buildings	$10,000
80% coinsurance clause	
Insurance required	8,000
Insurance carried	4,000
Loss	1,000
Insurance collectible	500

Note that the insured "coinsured" one half of any partial loss by carrying one half the agreed amount of insurance. If there had been $6,000 of insurance in force at the time of loss, the company would have paid $750, or six-eighths of the loss.

When the insurance is for the amount agreed upon, the assured collects the full amount of loss up to the face of the policy. Even though there is a coinsurance clause in the policy, the company is

never liable for more than the amount of insurance carried. In the foregoing example the assured would have been obliged to carry $10,000 insurance to collect full indemnity for his loss if his property had been totally destroyed.

In various parts of the country there are two other clauses which are used for the same purpose as the coinsurance clause. One is called an "Average Clause" and the other a "Contribution Clause." In a great majority of all losses the same amount of payment will be produced by the application of any one of these three clauses. Where there are two or more policies in different companies, covering all or a part of the same insurable interest, it is important that all policies read alike; otherwise differences of contract liability might exist, which are called "non-concurrency."

Although the policies of two or more companies may cover the same property, each in the same amount, differences in policy provisions may create different amounts of liability under certain loss conditions, and, therefore, different amounts of payment.

CHAPTER IV

Moral Hazard

Insurance companies do not insure things or property, they insure people against financial loss. The property or other insurable interest is the "subject of insurance," and the person who can lose by the occurrence of the insured peril is the "insured" or "assured." Insurance companies are, therefore, interested in the kinds of people whom they insure, as well as the chance that damage will occur to the property or interest insured.

Moral hazard, whether good or bad, is the extent to which ownership and care of property affect its desirability as an insurance risk. Moral hazard includes much more than the private morals of the person seeking to buy insurance. Lack of cleanliness, or carelessness in the disposal of waste material in a factory; business methods that make enemies in the community; a business that is on the downgrade with poor prospect of recovery; and lack of enough capital to run the business, are all elements of moral hazard. Of course, anyone engaged in an illegal activity is a poor moral risk. Whenever an insurance underwriter learns that one of these conditions exists, he knows that insurance for such an assured will involve more risk than was contemplated when the rate was made for the insurance to be issued.

The laws of the states prohibit discrimination between risks of like character and degree of hazard, but the law means character of risk, not the character of the insured. The rates are based upon the physical hazard. In fire insurance, for example, they are based largely upon construction, occupancy, exposure by other hazards, and fire protection. In automobile insurance the prime factors are size of car, the use to which it is to be put, and the traffic conditions of the territory in which it is usually operated. The rating schedules include no provision for higher charges when moral hazard factors make a loss more likely than in a risk where the insured is honorable, careful, and successful.

When a company is asked to issue insurance covering a building to a man who is careless, or one who has had several fire losses, it cannot charge a larger premium for the greater risk which it takes, so it must decide whether to accept or to decline the proposal. If the owner can be persuaded to give his building better care, or if it be learned that the previous fires were not his fault, the company is justified to consider the risk to be an average one, and to issue the policy.

The presence of good or bad moral hazard affects other kinds of insurance as much as it affects fire insurance. Relations with employees and care in providing safety devices are elements in measuring moral hazard for Workmen's Compensation Insurance. A prospective assured who is known to drink too much is a bad moral hazard for automobile insurance. Whenever it appears that the assured will be benefited by having a loss and collecting from the insurance company, the moral hazard is too great to be insured by any company. Sometimes the company learns, after the policy has been issued, that undue moral hazard exists, and it wishes to cancel the insurance.

Whether the company representative declines the insurance when offered, or cancels it after issue, he should be very careful never to give any reason for his action, except that the company elects to decline, or that the company elects to cancel. The company and the insured have this right of election at all times. If the company unwisely states that it elects to cancel because of moral hazard, and the assured feels that he is unjustly treated by that accusation, he has grounds for a damage suit against the insurance company.

It may be well to add here that this cancellation procedure is to be preferred even when cancelling for non-payment of premium. Maybe the premium has been paid and incorrectly credited, in which case the company may still be liable.

These precautions are not for the protection of the insurance company alone. They protect all honest and careful policyholders against the increase in insurance rates which would result from large losses paid to dishonest or careless people.

CHAPTER V

Kinds of Insurance and Insurance Carriers

As we noted in the first chapter, it is not possible to buy one policy that covers all the property of an assured against every peril that might cause loss. Insurance is regulated by the laws of the states and most of them limit the "kinds of insurance" that any one company may write. The five major divisions are Life, Fire, Casualty, Marine, and Surety, and each of these divisions is further subdivided.

For example, a company which is chartered by a state to write Life Insurance may also write annuities or pension contracts and may insure people against loss of earning power and extra expense caused by sickness or accident. Fire insurance companies may insure against *direct* loss and damage to property caused by perils such as fire, windstorm, earthquake, hail, flood, explosion, riot and civil commotion, and against *direct* loss and damage by fire, theft and collision on automobiles and aircraft. Fire companies may also insure against *indirect* or *consequential* loss such as the loss of net earnings which a business suffers when it is shut down by one of these perils. Another instance of this kind of *consequential* loss is the damage to goods in cold storage when the refrigeration is suspended by a fire, windstorm or explosion. When it has sufficient capital, a fire insurance company may include in its charter the authority to write marine insurance.

Casualty Insurance covers principally the liability of the assured to pay damages for personal injury or damage to the property of others caused by the insured or by any of his operations. A few forms of insurance against physical damage to the property of the assured, such as boiler and plate glass insurance, may be written by casualty companies.

Marine insurance covers ships, large and small; merchandise of

all descriptions when it is being transported by water, air, rail or other means of travel; the liability of a ship owner for personal injury to employees and the public or for damage to the property of other people; and generally against the perils on the seas, lakes and rivers.

Automobile and aviation insurance, involving both physical damage to the vehicles and liability of the owners for injury to persons and for damage to the property of others, is divided. Fire and marine companies write the property insurance. Casualty companies undertake the liability coverage. In automobile insurance there are two exceptions to this division of writing powers in that casualty companies may write collision insurance, and fire companies may write property damage liability. Inland marine policies, which cover property wherever it may be as it is moved from place to place, are written by fire, marine, and casualty companies, subject to legal limitations as to which kinds of risks may be written by each.

Surety companies are chartered to write bonds which guarantee that individuals, partnerships, and corporations will perform the contracts which they have undertaken; and Fidelity Bonds to guarantee the honesty of employees, public officers and others who hold positions of trust. Suretyship, strictly speaking, is not insurance, but it is regulated by the insurance laws.

When, by law, a company may write only certain kinds of insurance the employees of that company have had little incentive or opportunity to become acquainted with the other kinds. Among the reasons for the preparation of this volume are the changes in laws, recently enacted by a number of States, permitting companies to broaden their charters to include other kinds of insurance. As we shall see in the chapter on Multiple Line Underwriting Powers, these changes in laws place a premium upon knowledge of the entire field of insurance protection, as contrasted to expertness in one field only, such as casualty, or fire, or marine.

How much paid-up capital a company must have to write the

kinds of insurance prescribed by law, and how the states check up on the operation of the companies to safeguard the interest of the policy owners, will be discussed in the chapter on Regulations and Supervision.

We have used the expression "property or other insurable interest." An owner may wish to insure against fire and lightning, explosion and windstorm, to repay him for damage to, or destruction of, his dwelling or other building and contents, his automobile, yacht, or merchandise in storage. These items are property.

Besides the things which he owns, he may have financial interests which will suffer when a loss occurs to the property owned by someone else. He may have a mortgagee's interest in loss to property pledged as security for a mortgage loan. The money which he expects to earn in his business is not property, but he will suffer loss if an insurable peril destroys his plant or his store and interrupts his business operation. When an insured leases a building for a long term of years at a fixed annual rental, the lease usually provides that it shall be cancelled if the building is destroyed or so damaged that it cannot be occupied. Rents frequently rise (sometimes double or treble) during the terms of long leases and, if the lease is cancelled, the tenant will have to pay a higher rent for new space. He can, therefore, lose the difference between the new rental rates and those in his valuable lease. This is called "leasehold interest."

All of these insurable interests, and many more like them, are proper subjects for insurance because they comply with the five basic principles upon which insurance relies for successful operation.

Insurance Carriers

Individual underwriters, groups of underwriters, reciprocal exchanges, mutual insurance companies and capital stock companies, whatever the plan of organization, are still known as "Carriers." All of these carriers do business for a profit, as we shall see by a brief examination of the form and operation of each. This is true

because the profit or the loss of the venture under each plan goes to those who guarantee the payment of the policy liabilities.

Lloyd's, London, is an association of groups of individual underwriters. A number of men, wishing to engage in the insurance business, post with the association an acceptable guarantee that they are able to bear a certain amount of loss out of their personal means. They hire a trained underwriter, as secretary, to represent the group and to sign or "underwrite" risks for their joint account, each member taking a fixed percentage of every policy which the secretary accepts. These group secretaries have desk space in Lloyd's rooms where brokers, representing the insured, bring to them proposals for insurance. The brokers go from desk to desk, soliciting various secretaries to sign binder forms for such percentage of the amount of insurance desired as each secretary thinks that his group should carry. When the full amount is subscribed, the signed binder goes to the association's central office where the commitment of each group is entered against the total liability which it is authorized to assume. Then the policy is issued and the broker may deliver it to the insured. At no time may a group have more liability at risk than it has shown that it can guarantee. Lloyd's is licensed to operate in some states in this country.

A reciprocal exchange is a number of property owners insuring each other against loss by some particular peril—fire, for example. Usually these are manufacturers or business men, all in one kind of business. They employ an attorney-in-fact who acts for them in the issue of policies to members of the exchange, collects the premiums for all policies, and adjusts and pays all losses. If the total premiums collected at prescribed rates are not enough in any one year to pay all the losses and the expense of doing business, each subscriber to the exchange is liable for his pro rata share of the shortage. He profits in the same proportion if there is a surplus of premiums over losses and expenses.

It is the theory of a mutual insurance company that the company belongs to the policyholders, and that each one will obtain his in-

surance at cost. The earliest insurance companies in this country wrote fire insurance on the mutual plan. Initial premiums were collected under a schedule of rates, and the assured received a return premium called a "dividend," when the outgo for losses and operating expenses was less than the income from premiums. However, when this outgo exceeded income the assured was assessed for his share of the deficit according to the size of his policy. Later many mutual companies limited this assessment liability to two or three times the original premiums, and in recent years, with the growth of their surplus reserve funds, many mutuals have eliminated this assessment provision from their policies. These latter are called "non-assessable" policies.

A capital stock company sells shares of common stock to provide a capital fund which is held to guarantee the payment of its obligations, the largest of which are losses that may arise under the policies which the company issues. The company belongs to the stockholders whose money guarantees these policy obligations. The "paid up capital" is the par value of each share of stock times the number of shares fully paid for. Usually each share is sold for more than par and the excess forms the "surplus," which may be used for organization costs and other expenses, without impairing the capital. Whenever a stock company spends any part of its capital, the authorities force it to suspend operations, and the court appoints a receiver to liquidate its affairs.

The premium rates charged by a capital stock company are fixed for the term of the policy. If the income from premiums and from the company's investments is not enough to pay losses and expenses, the deficit must be made up by the company. Any profit accruing from the company's business belongs to the stockholders, even though it be left in the company's surplus.

Under all of these forms of insurance carriers the profit, if any, belongs to the guarantors of indemnity under the policies which are issued. This holds true whether these guarantors are under-

writers at Lloyd's, participants in a reciprocal exchange, mutual policyholders, or stockholders in a capital stock company.

For some years there have been insurance "Funds" operated by several of the states to carry workmen's compensation insurance, and more recently many states have added unemployment insurance and disability insurance to the risks which may be insured in the "State Fund." The Federal Government has entered the insurance business with Federal Old Age Benefits, (called "Social Security"), National Servicemen's Life Insurance, and the Federal Deposit Insurance Corporation. In each of these cases the government, Federal or State, is the guarantor of indemnity under the insurance contracts issued.

During World War II the risks to which property in this country were subject by enemy attack, or by resisting such attacks, were insured under policies of The War Damage Corporation, an instrumentality of the Federal Government. Most of the fire and marine insurance companies became issuing agents for The War Damage Corporation, to supply the protection quickly and economically to all parts of the country, and to the hundreds of thousands of property owners who wanted this insurance, and these companies, collectively, took a ten percent interest in the entire war damage account.

Where an owner of large numbers of properties, scattered over wide areas, sets up an insurance fund, and administers it within its own organization, charging against it the losses within certain limits, caused by specified perils, it is called "self insurance." These self insurance funds are subject to the same principles which govern the successful operation of insurance companies, particularly the necessity for spread and average of risk.

CHAPTER VI

Fire Insurance

Since 1667, when in Nicholas Barbon's office in London, houses could be insured against loss of damage by fire, this branch of the insurance business has expanded until almost every insurable interest which is imperiled by fire may be protected against that peril by insurance. We have seen that fire insurance was first written in the United States by mutual companies, and that stock companies and later reciprocal exchanges, entered the field. There are all three forms of carriers today. Let us follow a fire insurance policy from the time the assured orders it until it has passed through all the departments of a company, and let us pause in each department to see what steps are performed there, and why they are necessary. Finally, we will suppose a loss under the policy, and watch the adjustment and payment of the claim.

John Doe and Richard Roe form a partnership and buy a manufacturing plant to make window screens. The frame building, land, and machinery cost $150,000, and $25,000 will be needed for working capital. Since each partner has only $50,000 to put into the business, they borrow $75,000 from the bank, and give a mortgage as security. Doe knows more than his partner does about financial matters, so Doe arranges the loan with the bank, and the insurance with a local agent.

To determine how much insurance is needed on building and machinery, neither of which is new, they call in a reputable builder and a representative of the firm which made the machinery. The builder estimates that it would cost $120,000 to replace the building at today's prices for labor and material. The replacement cost for the machinery is found to be $30,000. The local agent tells Mr. Doe that frame buildings should be depreciated about 2% a year for wear and tear, and, as this one is five years old, the present sound value is $108,000. The average depreciation on this type of machin-

ery is about 10% a year, but it has been used only four of the five years since it was new. It, therefore, has a present sound value of 60% of the cost of new machinery, and should be insured for $18,000. As prices are not dropping, the local agent suggests fire and lightning insurance on both items in the amounts of these sound values. He quotes annual rates of $1.75 for building and $2.00 for machinery for each $100.00 of insurance, with the 80% coinsurance clause incorporated in the policy.

When Mr. Doe asks how the rate was arrived at, the agent tells him that nearly all the companies doing business in that state have kept accurate records of all premiums and losses for some six hundred classes of construction and occupancy. The combined experience of all these companies, with a factor added for the expense of doing business, has formed the basis for rating schedules to determine how much to charge for each kind of property. The rates resulting from these tabulations have been filed by the companies with a Rating Bureau, supervised by the State. When the Superintendent of Insurance, who is a state officer, finds that the filed rates are reasonable, adequate, and not discriminatory, he approves the filings made by the Bureau, and these become the legal rates until new rates become necessary, because of a changed ratio between premiums and losses.

The insured and the agent having reached an agreement as to the terms and conditions of the insurance to be written, the agent now has the policy typed in his office, using the 1943 New York Standard Fire Insurance Policy, which has been adopted by thirty-nine of the states. In the policy the assured is "John Doe and Richard Roe doing business as 'Doe and Roe'." A mortgage clause is attached making loss, if any, payable to the First National Bank, as its interest may appear. The policy is filed with the bank, and a copy, called a "mortgagor's certificate," is given to Doe and Roe. Two other carbon copies, called "Daily Reports," are made when the policy is typed. The agent retains one for his files and mails the other to the company.

When this daily report arrives at the insurance company's office, the underwriting procedure begins. First, a classification number is marked on the "daily" according to the kind of risk insured—for example, woodworking plants in frame buildings situated in a city with the finest kind of public fire protection may be classed "167." Then the new risk is recorded, either by typing on a large sheet known as a "Bordereaux," or by punching an I. B. M. statistical card, ruled with columns for the items of information which the company must tabulate. "I. B. M." stands for International Business Machine. The cards are called "stat" cards. As a minimum, either of these records must show the agency which wrote the policy, the state where the property is located, the amount of insurance and premium, the number of years the policy is to run, the dates of issue and expiration, and the classification number.

After being recorded, the daily report, with others received in the same mail, is taken to what some companies call the "Impairment Department." A clerk marks on the daily the financial rating for Doe and Roe as shown in Dun & Bradstreet's Reference Book. Another clerk checks the loss information files to see what fire losses, if any, this partnership, or either of the partners, has suffered. Their fire record is then marked on the daily which now goes to the "Map Clerk." The company office has Sanborn Maps for every principal city and town in the territory where it operates showing every building, drawn to scale, with symbols for construction, occupancy, kind of roof, height and thickness of walls, wire glass windows, if any, width of streets and size of water mains, open stairways or other unprotected openings between floors, and location and size of boilers.

After marking the map with a pencil notation of the policy number, amount, and expiration date of the new risk, the map clerk requisitions from the file department the dailies for any other policies noted on the same building, or other buildings so near to it as to be subject to one fire. He sees a notation that the company's files contain an inspection report on this property made two years

earlier by a "Special Agent" and, with the dailies, he puts this report in the map to aid the "Examiner" in passing upon the desirability of the risk, and the amount of risk to be retained by the company.

The line sheet tells the examiner that his company, to maintain "average of risk" within a certain class, will retain $30,000 as its "Net Line" on this property. The policy covers $108,000 on building and $18,000 on machinery, so he must arrange "reinsurance" of $96,000 with other carriers. His company has "treaties" with two reinsurance companies, each of which will share in this risk for amounts up to twice his company's net line. Accordingly, the examiner "cedes" reinsurance of $48,000 to each of the treaty companies, and he sends the daily to the "Reinsurance Department," where "cessions" are prepared to advise the reinsurers of their participation. The daily report now goes to the "File Department." In most head offices the files are run by states, with separations for each agency in the state, alphabetically arranged. Within each agency folder the daily reports are filed in numerical order, and once a year those which have then expired are removed.

Six months now elapse and the local agent sends a "Loss Notice" to the company, advising it that Doe and Roe have had a fire on a certain date, and that he estimates the damage under its policy at $20,000 to the building and $5,000 to machinery. The "Loss Department" gets the daily report from the files and sets up, on the company records, an "incurred loss" of $25,000. The General Adjustment Bureau, which serves many companies, or some other loss adjustment organization, is then notified to determine the amount of the company's liability, and to adjust the loss. If the company employs a "Staff Adjuster" in the area, it may refer this loss to him for attention. The adjuster reviews the coverage under the policy, as shown by the agent's copy of the daily report, and then visits the scene of the fire. He finds that this was an honest loss, so far as the insured is concerned, having been communicated to the Doe and Roe building from another building, situated across an alley

in the rear. John Doe, who handles the adjustment for the partnership, shows a disposition to want only to be indemnified for the actual damage caused by the fire. The adjuster, from his knowledge of costs to repair the building and of replacement costs and depreciation on the machinery, checks the itemized list of sound value and loss and damage, which the insured has prepared, as required by the conditions of the Standard policy. They agree upon the amount of loss at $22,510, being $18,000 on the building and $4,510 on machinery. The adjuster finds that the amount of insurance in force on each item, at the time of the loss, is more than 80% of the sound value of the property insured. The insured, therefore, is entitled to full payment of the loss, and the adjuster prepares a "proof of loss" for the insured to sign.

After the loss department has checked the proof of loss, and finds it to be correctly made out, the company mails a loss draft to the insured, or to the agent for delivery to the insured. The draft is made payable to "Doe and Roe and the First National Bank" because of the mortgage clause in the policy. This requires the endorsements of both parties before the company will honor the draft and pay out the money. The insured and the mortgagee having endorsed it, the draft is deposited with a bank for collection. This draft is not a check, but is payable upon acceptance by the company. Between the time when the draft is issued and the time when it is presented for payment, the company may discover some fraud or other reason why it is not liable for the loss. The company may then refuse to honor the draft, and will return it to the bank.

While investigating the origin of the fire in the building across the alley, the adjuster learns that a tenant in that building was operating an illegal still to make alcohol. The still had exploded and started the fire that damaged Doe and Roe's plant. This circumstance does not affect the company's liability to pay Doe and Roe, but under the subrogation provision in the Standard policy the insured is obligated to assign to the insurance company all right of recovery against any other party to the extent that the company

has paid the loss. John Doe cheerfully executes this assignment, and the company enters suit against the operator of the still, to recover what it has paid under its policy.

Whereas we have followed only the fire property damage policy on the building and machinery, the partnership has an "Extended Coverage Endorsement" attached to the fire policy covering against damage by windstorm, hail, explosion other than steam boilers and appurtenances operated or controlled by the insured, riot, civil commotion, aircraft, vehicles, or smoke. They also have a "Use and Occupancy" or "Business Interruption Indemnity" policy.

The Use and Occupancy policy insures the net profit and those unavoidable expenses which would have been earned had there been no interruption of the business by fire or windstorm damage. The time required to repair the fire damage to building and machinery is agreed upon at sixty days, so Doe & Roe will lose one-sixth of their anticipated annual net profit plus one-sixth of the usual expense for taxes and advertising, and for the wages of those employees who must be retained.

So long as they can enjoy the occupancy of their plant, and use its facilities to make screens, Doe & Roe will earn a gross profit from the manufacture and sale of their product. Out of this gross profit there will be a net profit for the partnership, after paying operating expenses and taxes. During a period of enforced idleness there will be no gross profit and no net profit, but certain expenses have to be met, provided they wish to resume business. Most of their employees are specially trained and can not be replaced readily, so these must be paid during the shut-down. Taxes and advertising expense will continue.

At the end of each month the agent mails to the company an "Account Current" listing all of the policies written in that month by the agency. From the total of the premiums for all such policies the agent deducts the commission due him, leaving the "Agent's Balance" which is due the company. A time limit is fixed in most

agency agreements in which to collect the premiums and remit the balance to the company. Checking the Account Currents against the record of individual entries made day by day as daily reports arrive, is the job of the "Accounting Department," which also accounts for all income and outgo such as premiums and losses, taxes, investment income, salaries and other expenses, and all matters of debit and credit arising in the company's business.

The progress of a daily report has been followed in detail because the daily reports are the records of the policies written by a fire insurance company. All of the company's premium income and all of its loss liabilities arise under its policies. In addition to the departments for receipt and dispatch of mail; for underwriting; for the adjustment and payment of losses; and for accounting, the company must have other departments to perform the duties which their names indicate. The supply department equips agents with blank policies, policy forms, riders and endorsement forms, accounts current, loss notices, and advertising material. It usually keeps a record of all blank policies shipped to agents.

The financial department handles the investment of the company's funds. It keeps posted on how much the company must have invested in certain kinds of securities to comply with the laws of the states in which the company is licensed to operate; the security and yield of all the various investments which a fire insurance company can make legally; and it must know when it is most profitable to buy and to sell certain securities, as the market fluctuates.

It is the responsibility of the executive department, consisting of the officers of the company, to supervise every activity of the company; to see that competent employees are engaged for each job in the organization; to devise and plan proper extension of the company's business; and to coordinate the work of the several departments so that it produces an efficient and harmonious whole.

The officers are responsible to the Board of Directors, elected by the stockholders to watch over their interests.

At the end of the year the "Statistical Department" experiences

its busiest season. Throughout the year it has been accumulating punched "stat" cards, showing the details of information which appear as totals in the "Convention Form of Annual Statement" which the company must file in every state where it does business. The "Stat" cards are sorted by I. B. M. machines and each assortment is tabulated and totaled by other I. B. M. machines, faster and more accurately than could be done by hand. Early in the new year the company knows how much policy liability it has assumed during the preceding year, how much has been cancelled, and how much continues in force. It knows the total amount of premiums written and return premiums, and how much of the net premiums remain still to be earned because the policies have not expired. Net premium figures are accumulated in the statistical department by states, to figure the premium taxes due in each state.

When a loss is reported to the company an agent or a loss department employee makes an estimate of the amount which it will probably take to cover the company's liability when the loss has been adjusted. The total of these amounts is known as "incurred losses." The amount of losses incurred, the amount of losses adjusted and paid, and the amount to be reserved for losses incurred but not adjusted; the amounts of premiums and losses for each classification of insurance written, and much other statistical and accounting information must be exhibited in the company's annual statement.

One of the most important reserves, from the policy owner's standpoint, which property and casualty insurance companies maintain, is the reserve for unearned premiums. When a policy is written no part of the premium is earned by the company. The premium becomes earned as the policy term expires and one half of it is, therefore, earned when one half of the policy term has run. It would be unduly expensive to examine every policy in force at the end of every year to determine how much of the premium was still unearned, so the supervisory authorities have adopted a formula for the purpose. It is assumed that on each day of the year a com-

pany writes policies for each term of years for the same amount of premiums.

Let us assume that a company's books show that during the year the total premiums on its one year policies were $365,000. Under the formula this would mean that $1,000 in annual premiums became effective each day of the year. Policies that became effective on January 1st will expire at the year end and the premiums thereon will be wholly earned. No part will be earned of the premiums that became effective December 31st. All the policies written in that year have run an average of six months. On the one year premiums the earned proportion will be fifty percent and the unearned fifty percent must be held in reserve. The earned proportions for three year and five year policies are one sixth and one tenth, respectively, and the unearned premium reserves are 83 1/3% for three year terms and 90% for five year terms.

If a policy is cancelled before it has run its full term the company has in reserve the amount of return premium due the insured. This reserve is sometimes called the "Reinsurance Reserve" because it represents the amount which the company would need to reinsure its policy obligations in some other insurance company.

CHAPTER VII

Casualty Insurance

THE PRECEDING chapter follows a transaction in fire insurance from the time when two men form a partnership and purchase a manufacturing plant, which is subject to the peril of fire, until the time when they suffer a loss and collect their claim under a policy. It shows the details of recording, accounting, and underwriting, and describes where the company gets the information to form its judgment of fire risk, and how it adjusts a loss and pays a claim. In casualty insurance company procedure the recording and accounting is not much different from the practices in fire insurance offices, but underwriting of some casualty lines must be approached differently, and loss adjustments are handled by what is accurately called a "Claims Department."

Most fire insurance policies cover physical property upon which the sound value and the amount of damage can be appraised to the satisfaction of anyone who is not unreasonably biased. Only a few of the kinds of insurance written by casualty companies cover tangible things. Losses under burglary, plate glass and automobile collision policies can be adjusted in the same manner as other claims for physical damage are adjusted, but most of the policies issued by casualty companies cover the liability of the insured for damage claimed by third parties. Under these policies the payment by the company depends largely upon the amount for which the third party is willing to settle, or upon the award of a jury if the claim gets into court. For this reason casualty carriers are known as "Liability Companies" or "Indemnity Companies."

Many of the claims made against the insured under casualty insurance policies are unreasonable, either as to the nature of the damages claimed, or as to the amount which the third party says that he or she should receive. The success of a casualty company is very largely dependent upon the skill with which its claims de-

partment determines how much should be paid upon each claim, particularly the ones involving alleged bodily injury. The claimants frequently ask for exorbitant sums for injured feelings. The adjustment of such claims requires experience, knowledge of law and human nature, and a great deal of tact.

Many claims are just in nature and amount, and should be paid as filed; others can be settled on an equitable basis by negotiation; some should be resisted even to the point of litigation. Many competent casualty company chief officers received their early training in this important branch of the company's work.

After we have watched the facilities of a casualty company supply additional needed security for our old friends Doe & Roe, we will examine a typical claim settlement under a liability policy.

After John Doe buys fire and windstorm insurance covering the window screen factory, and use and occupancy insurance to protect the net earnings of the business, he asks the local agent what other kinds of insurance the partnership should carry. This puts the agent upon his mettle to overlook no insurable hazard which can seriously affect the finances of his client. He prepares an "insurance survey" for Doe & Roe, listing all property owned or rented by the firm and by the partners individually, and showing in a parallel column the kinds of insurance protection they should carry. The survey shows the following property and insurable interests exposed to losses which can affect the finances of the firm in the operation of the screen factory:

a—The plant building, machinery, and stock
b—Two automobile trucks at the plant and one car owned by each partner.
c—Twenty employees subject to the State Workmen's Compensation law
d—Two employees who handle the firm's money
e—One heating boiler; one power boiler; and one elevator
f—One office safe in which collections might be kept overnight. Deposits and payroll carried to and from the bank

g—A private dwelling owned by each partner

h—The net profit from the business which would be interrupted if the plant were damaged or destroyed

i—The value of each partner to the business

The agent then sits down with John Doe and his partner to explain the needs for the kinds of insurance which he recommends in the second column.

a—Earthquake damage—This coverage is written by fire insurance companies. The building and machinery of the plant are already insured against loss by fire, lightning or windstorm. The agent quotes very low rates for earthquake damage, because the plant is not in one of the zones where earthquakes have occurred recently. The agent reminds the partners, however, that two of the disastrous earthquakes in the United States occurred in South Carolina and in the valley of the Missouri River.

b—Automobile Insurance—Of course insurance is necessary on the plant trucks against claims for bodily injury or damage to the property of others, and against loss by fire or theft or collision damage to the trucks themselves. The same kinds of insurance are needed on the private passenger cars operated by both partners. A large damage suit against one of them, individually, can wipe out that partner's investment in the firm. The standard limits of protection under such policies are $5,000 for injury to one person; $10,000 for injury involving two or more persons in one accident; and $5,000 for damage to the property of others. Both partners readily see the advantage of increasing these limits of protection to $50,000, $100,000, and $10,000, respectively, when the agent shows them the small additional cost for the higher limits.

c—Workman's Compensation—In the state where Doe & Roe operate, the law provides the percentage of regular wage which must be paid to each employee while incapacitated by an accidental injury in the course of his employment, or by disease resulting from his work. The law also makes the firm liable to the estate of an employee who may be killed in like circumstances.

The statute provides three methods by which the firm can guarantee that these compensation payments will be made. They can buy insurance in a casualty company licensed in the state; they can buy insurance in a fund operated by the state; or they can carry the risk themselves, and post an acceptable guarantee of their ability to pay claims that may arise. Although the National Council on Compensation Insurance makes most of the rates for this kind of insurance, several of the States have their own departments making compensation insurance rates for risks within their own jurisdictions. Typical of these are New York, New Jersey and Pennsylvania.

The premium is based upon the insured's payroll as an employer. This has been found to be an accurate measurement of the exposure under the policy as the total payroll increases or decreases with the changes in the number of employees, and with the changes in the rates of wages which govern the benefits which the laws require to be paid.

d—Employee's Fidelity—A blanket fidelity bond is recommended on a "position basis" to cover dishonesty by any employee who may be hired to hold one of the positions where money will be handled. Each of the employees now holding these jobs will be required to make out an application with important facts concerning himself and his record, and naming three references with whom the bonding company will check up. Bonds are not issued to people with known records of untrustworthiness, so it is sometimes said that bond losses are paid only on honest people. The well informed agent recommends that all of these coverages be combined under a Broad Form Moneys and Securities Policy, including dishonesty, destruction, and mysterious disappearance. In the casualty insurance business this coverage is called "D. D. D."

e—Boilers and Elevator—An explosion in the boilers can damage the plant and cause severe injury to workmen or others who may be in or near the building. The principal value of boiler insurance is the expert inspection service furnished by the casualty

company. No honest man wants his boiler to explode, but, even after the finest possible inspection, an accident may happen, and the policy provides limits of indemnity to be paid for such owner-operator liability. The rate is less for a heating boiler if it uses fifteen pounds steam pressure, or less.

The agent explains that under boiler and elevator policies the inspection service alone, performed by highly expert men, is worth all that the insurance costs, even though the policy also provides indemnity for claims, if an accident occurs despite the greatest carefulness.

f—Safe Burglary, Hold-up, Messenger Robbery—The office safe is of the burglar-proof variety, and, since the amount of collections to be held overnight will probably never exceed $5,000, the premium to cover against burglary is very small. An interior hold-up and messenger robbery policy protects the firm's money in the plant office, and between the office and the bank. This protection is included in the D. D. D. policy.

g—Comprehensive Personal Liability—At first neither partner can quite see why the ownership of their private residences can affect the need for insurance at the factory.

The agent speaks briefly of several recent incidents which both partners recall: a cleaning woman in a neighbor's home was badly hurt by falling down the cellar stairs; a passer-by sprained an ankle when he slipped on the sidewalk; in two hunting accidents during the previous autumn a careless hunter was held to be responsible; and a caddy at the golf course lost an eye when hit by a wild shot. A judgment for such an accident could impair the partners' ability to finance their business.

Such claims, in fact any liability for personal injury or damage to the property of others caused by any personal activity, including sports, are covered by the comprehensive personal liability policy. This coverage does not, however, include workman's compensation claims nor the operation of automobiles, watercraft or aircraft.

h—Use and Occupancy—The necessary amount of Use and Occupancy insurance to protect the prospective earnings of the business has already been arranged.

i—Life Insurance—"Mr. Roe," says the agent, "you know how to make screens, and where to obtain the materials at the best prices. You also have a crew of workmen who are devoted to you because they have faith in your ability and fairness. You are the plant manager, and Mr. Doe is the salesman and financial man for the business. Each of you has a separate kind of ability and training, so you combine the two and form a partnership. What will happen to this business if either one of you should be suddenly taken away by death?"

"I guess that's a risk we have to take," Mr. Roe replied.

"You can turn over that risk to an insurance company," says the agent. "Buy life insurance for a reasonable amount on the life of each of you. It can't restore a partner to the business, but it can tide over the remaining partner until he makes other arrangements, or it can be used to buy in the interest of the deceased member." The partners sign applications for "Business Life Insurance" in the amounts of $50,000 each.

When the premiums are totalled for the various kinds of insurance, Richard Roe, the plant manager, whistles. "That's a lot of money," he remarks.

"Not when you realize that we can't operate without the protection," his partner replies, and he adds, "A business isn't worth while which can't afford to insure itself."

Months after the insurance survey for Doe and Roe is made by the local agent, and the partners have purchased the recommended insurance, the agent receives a 'phone call by John Doe from a city some hundred miles away. He reports that one of his trucks has been involved in an accident on the highway, slightly injuring the truck driver and causing serious injury to two occupants of another car. The other car, he says, is demolished, but the truck has sus-

tained no damage. The agent takes names and addresses; tells Doe that the insurance company will pay for the long distance call; and promptly wires the company.

Within two hours a claims adjuster from the company's office nearest to the accident appears on the scene. He takes statements from the truck driver and from Doe, who was riding on the truck at the time. At the local hospital he is allowed to talk with the passengers of the other car, and then he takes a statement from a third motorist who had witnessed the accident. From the evidence it is clear that the other car hooked bumpers with the truck while attempting to pass. The driver of the wrecked car, who escaped unhurt, contends that the truck deliberately tried to prevent him from passing, and turned into him, which was positively denied by Doe and the truck driver.

The other witness states that he was driving behind the truck and saw the entire incident. He says that the truck did not swerve from a straight course. The adjuster advises Doe to take the truckman home and have his injured arm x-rayed. His medical bills and loss of time are covered under the compensation policy.

Later, to Mr. Doe's astonishment, the occupants of the other car bring suit, as one of them had said they would do. The testimony of the driver of the third car is discredited, as it is shown that he has poor eyesight. The jury awards damages for the value of the wrecked car and $7,500 to each of the badly injured occupants. Thus the insurance company is called upon to pay under workmen's compensation, liability for bodily injury, and liability for damage to the property of others.

The case we have chosen arises out of an accident involving a car owned by the insured. The liability of Doe and Roe for damages will be the same if the truck is rented or borrowed by the partnership, or if the accident involves a car driven by an employee while on business for the firm.

CHAPTER VIII

Marine Insurance

THE BUSINESS of insurance is always interesting, frequently exciting, and sometimes romantic. No branch of the business contains more romance than marine insurance. Even the language of the business calls up pictures of the days when sailors shipped before the mast; pirates and privateers roamed the seven seas; and mutinous crews seized vessels and sailed away to start new colonies on barbarous South Sea islands. "The Master's Protest." "Barratry of Master or Crew." "Jettison of Cargo." "The Lutine Bell." When we learn the origin and the meaning of these phrases as they are used in marine insurance we find that, as thrillers, they rank with "Jolly Roger," "Pieces of Eight," and "Walking the Plank."

One of the bulwarks of this country's prosperity is its foreign trade. In the United States we have great natural resources of timber, oil, ore, and rich farming and grazing lands. We produce more food and manufactured articles than we need for ourselves. People who rarely travel widely do not realize how much their standard of living depends upon selling our surplus to the people in other countries and receiving products from those countries. This requires transportation by sea. The owners of ships and merchandise dare not take the risks of ocean travel without insurance, and so marine insurance helps all of us to live better.

The Latin word for "sea" is "mare." Marine insurance deals with the perils of the sea and navigable lakes and rivers. It also covers perils that are on the sea but not necessarily of the sea, such as fire, thieves and rovers, enemies, and seizure of the vessel and cargo by kings and princes. The subjects of insurance are vessels and their cargoes, freight to be earned by marine transportation, and the liability of ship owners and operators for injury to persons or to the property of others. We have traced in previous chapters some of the early practices of individual marine insurance underwriters

and the growth and improvement of the business at Lloyd's, and by the British companies. In this country most of the marine insurance is written by companies, both domestic and licensed foreign companies, and a large majority of it by capital stock companies, many of which also write fire insurance. State laws permit these two kinds of insurance to be written by the same company when it has sufficient capital and its charter includes both kinds. A small percentage is placed at Lloyd's.

For insurance purposes the property and insurable interests that may be covered under marine policies are separated into four divisions. They are (a) hulls and machinery, (b) disbursements, (c) anticipated earnings (freight), and (d) cargo. Protection and indemnity insurance, written by marine underwriters, will be separately discussed as it is really a form of casualty insurance.

Theoretically the value of a vessel at any one date is the amount of net freight that it can probably earn during the years before it must be taken out of service, plus the scrap value of the worn-out vessel. Actually, the supply of vessels of its kind and the current demand for such have great bearing upon the valuation to be insured. This value may be divided, for insurance purposes, into two items: (1) hull, tackle, apparel, passenger fittings, equipment, stores, ordnance, munitions, boats and other furniture; and (2) boilers, machinery, refrigerating machinery and insulation, and everything connected therewith. When insurance is offered on a hull the underwriter can get a rather complete description of the vessel from the American Record or Lloyd's Register. All the larger ships of the world are listed showing the name of the owner, where and when built and by whom, tonnage, rigging, type of boilers and machinery, date of the most recent survey, and other items of information which complete the description of the ship. In addition to this information, most well organized marine underwriting offices have their own highly trained ship surveyors who inspect ships to be insured.

Moral hazard plays a large part in marine insurance, as in other

forms. Who the insured is, his record, and the nature of the trade in which he engages, are considered by the underwriter. When the value of the hull is agreed upon between the owner and the insurer, the vessel may be insured for that amount under a "full-form" hull policy which covers partial as well as total losses. Under a separate policy the owner may purchase additional insurance covering disbursements and excess liabilities against total loss and contribution to "General Average and Salvage Charges."

In marine insurance the meaning of "average" is different from the usage in other kinds of property insurance. The French word "avarie" means "damage to ship or cargo." General average is a loss involving all the interests on the ship, as in the case of the jettisoned sheep in the chapter on history. Particular average involves partial loss to one interest only, such as damage to a cargo of flour caused by sea water washed into the vessel during heavy weather.

The use of the term "disbursements" in marine insurance deserves some explanation. In early times vessels were frequently engaged in long voyages which kept them far from their home ports for months at a time. The master of the vessel, having no opportunity or means of communicating with the owners during such voyages, sometimes carried considerable sums of money on board with which to pay port fees, loading and unloading charges, and other incidental expenses. This supply of money was carried to be "disbursed" as the voyage progressed. The additional amount at risk was not part of the value of the hull, and so it was separately insured.

The printed forms under which hulls and machinery are written for a term (usually a year) are called "time clauses" to differentiate term insurance from coverage for a trip only. On the Great Lakes these term policies on hulls are called "Lake Time Clauses." They contain warranties that ships of specified construction will not be engaged in navigation between certain dates in the late autumn and other certain dates in the spring. The autumn dates may be extended by payment of additional rates for "post season sailings."

The written language of these clauses, or policies, sets forth the contract between the insured and the company, but there are warranties by which both parties are bound. If the usual printed form does not fully express the intention of the insured and the company to insure a certain risk, express warranties may be added to the policy in writing. There are also implied warranties by which both parties are bound. These are implied agreements that the insured and the company will recognize and be governed by the decisions of courts, some of them very old, which establish legal custom among merchants. Marine insurance, like other kinds of indemnity contracts, is based upon good faith between the contracting parties. If the insured misrepresented or concealed any material fact, and the company was thereby influenced to issue a policy which it would not otherwise have written, the courts will hold the company not liable for a loss under such a policy and the underwriter may elect to void the policy. If the policy was obtained through fraud, it is void from the date of issue.

In other forms of property insurance the companies' liability for loss is usually limited to the actual cash value of the property at the time of the loss and not exceeding the face amount of the policy, but marine policies are "valued forms." The assured and the company agree before the ship puts to sea upon a value which will be used in event of loss. This is a practical necessity because there will be no opportunity to appraise the value of a vessel which is lost at sea. This practice is not a violation of the principle of indemnity because the underwriter has before him all the pertinent facts concerning the vessel at the time the value is agreed upon with the owner.

In the water-borne commerce between nations vessels are only part of the values subject to perils of the sea and perils on the sea. The real purpose of this ocean travel is to transport cargoes of the things which are bought and sold in foreign trade. There are more shippers of cargo than there are owners of vessels, and so cargo insurance is of value to a greater number of people than is hull in-

surance. Also the value of insured cargoes carried during a year greatly exceeds the value of all insured vessels.

To thoroughly understand the contribution to world trade which has been made by marine insurance on cargoes, one must be familiar with the use of "bills of exchange" which were devised by Jewish merchants in the twelfth century. These evidences of the ownership of goods which have been shipped elsewhere could become valueless unless the goods were insured against the risks of transportation.

Usual shipments of merchandise require the completion of four documents:

1—The invoice. This is the shipper's bill for the goods and it sets forth the terms of the sale.

2—The bill of lading. This is the receipt given by the vessel or other carrier.

3—The bill of exchange, or draft. This is the payment made to the shipper by the buyer.

4—The insurance certificate or policy. This guarantee against loss of the goods makes the bill of exchange a safe substitute for actual money.

Without the security of marine insurance on cargoes few shippers could afford to take the risks to which their goods are subject while in transit. What has been said here about cargoes in vessels is equally true of shipments by rail.

The mechanism by which marine insurance performs its part in our national economy, the things which it does and the tools which it uses, cannot be fully described within our space limitations, but we can examine the principal operations, even though briefly. Just as inspectors for fire and casualty companies must understand construction and manufacturing processes and the common and special hazards which are found on shore, the inspectors for marine companies, who are called "ship surveyors," must know ships and cargoes. A surveyor must be an expert on ship equipment and opera-

tion, on the many kinds of cargo that are shipped to and from every part of the world, how each kind should be "stowed" or loaded into the vessel, and how much it is worth in damaged or undamaged condition.

Marine underwriters must have freedom to weigh the risks involved in each venture to be insured and to calculate a rate to insure it. Nearly every voyage involves different degrees of risk and no schedule rate could be applied without unfair discrimination. Two cargoes of the same materials in the same vessel, carried between the same ports, may be quite different risks at two seasons of the year. To properly judge the acceptability of a risk the marine underwriter must have the classification lists earlier described, the detailed report of a competent surveyor, and he must keep himself posted every day upon what is happening in the field of marine transportation all over the world.

A ship, like an automobile, may collide with other objects, and people may be injured on the ship or by its operation. In the main, protection and indemnity insurance assumes for the ship operator the same kinds of liability that automobile bodily injury and property damage insurance cover for the motorcar operator, except that collision with another ship is usually covered by the hull policy.

When a person claims damages caused by an automobile, he lodges his claim against the car owner, but when a ship collides with a pier or a bridge, or a person claims that he has sustained bodily injury for which the ship owner should pay, the claimant may "libel" the ship when it reaches port. The vessel cannot obtain clearance papers to permit it to sail again until it posts a "release libel bond" with the authorities. These bonds are obtained from a surety company. The ship operator then notifies his protection and indemnity carrier, giving details of the alleged collision or other accident. The "P. and I." underwriters examine and appraise the amount of damage and cost of repairs, if the loss involves property like a pier, wharf, or bridge, and proceed toward a settlement with the claimant. Claims for bodily injury by members of the crew

and by passengers or other persons are handled by a claim department in much the same manner that casualty companies settle personal injury claims.

Disbursements insurance, it will be remembered, covers in event of total loss and also contributes to general average and salvage charges. A general average loss involves all the interests in or on the ship; hull, freight, disbursements, and cargo, and when a vessel is saved, or "salvaged," the expense for saving the ship must be borne by all the interests which are benefited. For this reason all of the insurance on all of the interests must contribute toward such general loss and toward salvage costs.

Let us attempt a simple example by way of illustration. One company issues insurance on the ship "Twilight" in the amount of $500,000 on hull and machinery against total and partial losses, including general average and salvage charges. Under a separate policy the same company also covers $100,000 on disbursements against total loss only, but including contribution to excess general average and salvage charges. A second company insures cargo carried by the "Twilight" in the amount of $400,000. Although freight is, today, usually prepaid and earned when the cargo is loaded on the vessel, there is, in this instance $10,000 of anticipated freight, to be paid upon safe arrival of the merchandise. This $10,000 constituted "freight at risk."

The ship is stranded on a sand bar, and to float her, requires the services of a tug to tow her off the bar. The cost of the salvage operation amounts to $30,000, but the vessel has sustained no physical damage.

This is a general average (general loss) because the salvage charge was incurred in behalf of all the interests that were stranded on the bar—hull and machinery, cargo, and unpaid freight. Each must contribute its share of the loss according to the value of each upon arrival at port. The vessel is appraised at $500,000. The cargo was not damaged and has a contributing value of $400,000. The freight is valued at $10,000.

Now we find contributing values:

Hull and machinery	$500,000
Cargo	400,000
Freight	10,000
	$910,000

Contribution to general average:

Hull	—	500,000 / 910,000	x	30,000	=	$16,483.56
Cargo	—	400,000 / 910,000	x	30,000	=	13,186.84
Freight	—	10,000 / 910,000	x	30,000	=	329.60
						$30,000.00

The insurance on the hull and machinery is equal to the arrived value of the vessel, so the hull underwriters will pay the hull's contribution to the general average, and the disbursement insurance will not be called upon to contribute.

But suppose that when the vessel arrives in port she is appraised at $600,000.

Now we find contributing values:

Hull and machinery	$ 600,000
Cargo	400,000
Freight	10,000
	$1,010,000

Contribution to general average:

Hull	—	600,000 / 1,010,000	x	30,000	=	$17,821.77
Cargo	—	400,000 / 1,010,000	x	30,000	=	11,881.19
Freight	—	10,000 / 1,010,000	x	30,000	=	297.04
						$30,000.00

The contribution by the vessel is $17,821.77 and there is $500,000 insurance, but, by the terms of their policy, the hull underwriters are liable for no greater proportion of the loss than the ratio which the insurance bears to the contributory value. The vessel is appraised at $600,000 so the hull insurance pays 5/6ths of the hull's contribution ($14,851.48), and the disbursement insurance pays 1/6th ($2,970.29).

The work of a General Average Adjuster in marine insurance and the calculations made by actuaries for life insurance come nearer to being sciences than any other operations in the insurance business. When the amount of general average (loss) or salvage charges has been determined by the general average adjuster, he allocates the amount among the several interests according to their contributing values. There are only a few general average adjusters in the United States.

Some cargoes are insured "Free of Particular Average unless exceeding a specified percentage," say three percent. This means that if the particular cargo insured is damaged, the underwriters are not liable unless the loss is more than three percent of the value of that cargo. This is the same as a "franchise" clause in other kinds of insurance.

One more illustration may be helpful. The same vessel that we used for an example of general average, carrying cargo of the same value insured "free of particular average unless exceeding (3%) three percent," is tossed by a storm, sustaining damages of:

Hull and machinery	$10,000
Cargo	13,000

The first item will be paid in full under the hull insurance. This is not a general average, so the disbursement insurance will not contribute. The loss to cargo exceeds three percent of the insured value, and the cargo underwriters will, therefore, pay the full amount of the second item.

At the head offices of marine insurance companies are found all

the recording and accounting details which fire insurance uses, except that marine insurance is handled to a much larger extent by brokers who represent the assured and do business directly with the company, and, therefore, agency records are not so large a part of marine company accounting. In the seaports of the U. S., where most marine insurance is placed, the coverage desired by vessel and cargo owners is usually arranged with the companies by brokers. Many of these brokers are experts in marine insurance, having a thorough knowledge of policy provisions, the customs and usage of merchants, court decisions on such matters, and the available market for certain special kinds of protection.

CHAPTER IX

Inland Marine Insurance

THE TITLE by which we designate this form of insurance seems to be not properly descriptive unless we know how it came to be used. At one time it was called "inland transportation insurance."

Since marine insurance began it had covered property and insurable interests which had no fixed location but were moved from place to place. Consequently, it was held at an early date that the perils of transportation on inland waterways, such as lakes and rivers, were properly subjects for marine insurance. With the growth of commerce, merchants and manufacturers wanted insurance upon their wares in transit against loss by other perils besides fire. They wanted to be indemnified for loss to the merchandise in transit if caused by the stranding, sinking, burning, or collision of a boat, train, truck, or other vehicle carrying their goods, and for loss by burglary or theft, windstorm, water damage, or other peril.

The laws did not permit fire or casualty insurance companies to write all these kinds of insurance, but marine companies believed that they had such writing powers, and marine policies were written to cover all kinds of "floating" values, even jewelry and furs and other personal property belonging to individuals. Automobiles increased in number, and were insured under marine policies against the risks of fire, theft and collision, wherever they might be. Marine policies were extended to cover shipments of merchandise in warehouses for long periods after the transit risk had ceased.

The fire and casualty companies found that the market for their policies was being seriously invaded by the marine companies and they appealed to the New York Superintendent of Insurance to compel the marine companies to cease such raiding. The superintendent called together leading men in casualty, fire, and marine insurance companies to determine what kinds of floating policies should be written by each. With the agreement of these company

representatives the superintendent issued, in 1933, an official ruling defining the writing powers of marine companies. This "definition" has been called the "Constitution" of the marine insurance companies. It then became necessary to interpret the definition when new kinds of policies were requested by the public, and the companies set up a "Committee on Interpretation and Complaint" to decide, in each case, if the coverage could be written under a marine form. The companies also organized the Inland Marine Underwriters Association to draft forms and calculate rates for these new kinds of insurance. Since the property and interests to be insured were to be covered as they were moved about, the insurance should be under marine policies. The subjects of insurance, however, were not on the sea, but inland. Hence, "Inland Marine Insurance."

We will later consider the Personal Property Floater which covers household contents for residence owners against all the insurable risks to which furniture, personal jewelry and furs, books, wearing apparel, art objects, and sports equipment are subject. These are insured wherever they may be. This form is extensively written by fire and marine companies, and also by casualty companies. It is the largest item of inland marine insurance. Many other kinds of property would be insured only partly unless the protection followed the interest from place to place. Under the definition previously described certain instrumentalities of transportation are insurable under marine policies and included in inland marine. Bridges, tunnels, and piers are instrumentalities of transportation. These properties are not moved about, but they are subject to various hazards which cannot all be insured either by a fire or a casualty company. Therefore, they are classed as inland marine.

Firms which sell radios, refrigerators, furniture and other merchandise on the installment plan can take back the merchandise if the balance of the purchase price is not paid. If the goods be damaged or destroyed by an insurable hazard this security would be lost. The sellers, therefore, buy installment floater policies with the premium adjusted periodically upon the total amount of outstand-

ing unpaid balances, as shown by their books. Furriers and several other kinds of bailees, such as warehousemen, may insure their liability for damage to the property of their customers while it is on their premises, or otherwise in their keeping. The other kinds of inland marine policies seem to be explained by their titles.

The following is a fairly complete list of the inland marine policies now written:

Bridges
Bailees customers
Camera floaters
Coin Collections
Contractors equipment floaters
Exhibition floaters
Film floaters
Fine Arts floaters
Furriers customers
Garment contractors floaters
Horse and Wagon floaters
Installation floaters
Installment sales floaters
Jewelers block policies
Jewelry, furs and personal effects
Mining and Oil Drilling equipment floaters
Motor truck cargo
Musical instruments
Neon sign policies
Parcel Post
Pattern floaters
Personal property floaters
Piers and Wharves
Processors floaters
Radium floaters
Registered Mail
Rolling Stock floaters

Salesmen's sample floaters
Scientific Instrument floaters
Silverware floaters
Stamp collections
Surgeon's instrument floaters
Theatrical floaters
Transportation floaters
Tunnels
Voting and Vending Machine floaters
Wedding Present floaters

CHAPTER X

Suretyship and Fidelity Bonds

THE BUSINESS of corporate suretyship has developed within the last seventy-three years in the United States and within a slightly longer period in England. Even if we could truthfully say of every man that "his word is as good as his bond," there would still be a need for surety companies. Many of our commercial and industrial activities depend, for their success, upon the ability, as well as the integrity, of the contracting parties. Guaranteeing the performance of contracts, as made, is the province of surety companies, and many such have been organized, here and abroad, to meet the large demand for this assurance. Suretyship is really not insurance but a form of credit guarantee. The premium charged for a surety bond is the consideration for using the credit and financial strength of the surety company to guarantee the credit and performance of the obligor.

There are always three parties to a surety bond: the principal (obligor); the obligee; and the surety. A brief definition of the duties and obligations of each will make it much easier to understand the function of corporate suretyship; why it is preferable to personal suretyship; and how, in a general way, the business is operated.

One who is obligated by a contract to do a certain thing or things and who furnishes a bond to guarantee his performance of the contract, must sign the bond to which he thereby becomes a party. He is called the "principal" or "obligor."

The party for whom the contractor is obligated to do certain things, and who holds the bond of the contractor, is the "obligee." The bond is issued to him but he does not sign it as he has made no contract to be guaranteed by the bond.

The "surety" is the party who has guaranteed the "obligee" that the "obligor" will perform his contract, and, if not, the surety will

either perform the contract at its own cost or will pay to the obligee the penalty under the bond.

So nearly as the bonding business parallels the operation of insurance, the obligee is the insured and the surety is the insurance company. Where an insurance company has subrogation rights against a third party the obligor may be likened to that third party. The surety will be called upon to pay a loss under the bond only if the obligor fails to perform his contract and the obligor is then liable to the surety for the amount of the loss.

Before corporate suretyship became common practice, a public officer or a contractor asked his friends to sign his bond. Refusal to sign such a bond, or insistence upon investigating the ability and record and resources of the obligor, was construed sometimes as a lack of faith and true friendship. Frequently it was embarrassing to ask another to sign one's bond and also embarrassing to refuse to sign. Many a personal surety lost his fortune and his friend by signing the bond. On the other hand, it is expected that the surety company will make a thorough investigation before it will become a surety, and the cost of this survey is a substantial part of the premium rate. Purchase of a bond from a surety company is a business transaction.

Even though the surety may look to the obligor for reimbursement of any loss under a bond, losses do occur for which the surety receives no repayment. A contractor may have become insolvent or bankrupt, a defaulting employee or trustee may run away or may have no resources which the surety can attach. Besides the investigation costs and the other expenses of operating the business, the rates for bonds also include a factor for the loss experience which companies have sustained over a period of years under each type of bond. Let us briefly mention some of the forms of bonds which are in common use, except contract performance bonds which we have used as an illustration.

Lost Securities Bonds. When stock certificates or other securities, or life insurance policies, are lost or destroyed, the issuing company

usually requires that a bond be furnished by the owner before a duplicate certificate or policy is issued. The bond guarantees the issuing company against double payment if the original instrument is later presented for payment.

License Bonds. Those who hold licenses for the sale or transportation of beer, wine and liquors are required by various jurisdictions to furnish bond guaranteeing compliance with the law and the terms of the license.

Release libel bonds have been described in a previous chapter.

Official bonds are divided by underwriters into two classifications: Federal Bonds, and Public Official Bonds. These bonds guarantee that the official will perform the duties of his office in the manner required by law, including honest handling of funds with which he is entrusted.

Judicial bonds consist of two groups: those required for the faithful performance of trusts administered under the supervision of the courts, and those required of the parties to law suits where the litigants may be held liable for the payment of sums of money. These latter are called "Court Bonds." Under the first group of judicial bonds we find administrators and executors under wills; receivers, assignees and trustees in bankruptcy, and others appointed by the courts to act in positions of trust, and to account to the courts for their faithful performance.

Fidelity bonds, as the name implies, guarantee an employer against the dishonesty of an employee. Rarely do they involve the performance or non-performance of a contract.

CHAPTER XI

Life Insurance

LIFE MAY be a gamble and for many years, in the early history of this country, most life insurance was really gambling. We did not have the strong dependable companies which, for a modest premium, will now assume the uncertainty as to how long a man will live. Life insurance was underwritten by individuals who made a wager with the insured that he would not die within a specified period of time. The rate for such wagers was usually, almost uniformly, five percent a year. The insured bet $5.00, against each $100.00 of insurance, that he would die within a year.

The first life insurance company in the United States was organized by the Presbyterian Synods in New York and Philadelphia in 1759. Mutual life insurance, as it is known today, began with the founding, in 1842, of the Mutual Life Insurance Company of New York.

In life insurance, as in fire, casualty and marine insurance, there are both mutual companies and capital stock companies. In stock company operation non-participating policies are issued at fixed premiums, the profit derived from such belonging to the stockholders. Mutual companies issue only participating policies, and share the profits among the policyholders by dividends which reduce the net cost to the insured. Some capital stock companies also issue participating policies, under which the net premium cost is governed by the company's experience with that class. The ultimate net cost of life insurance in equally well managed mutual and stock companies should be about the same.

But there is this outstanding difference between capital stock companies writing life insurance and those which write casualty, marine, and fire insurance: capital stock is only incidental to the stability of a life insurance company, after it becomes well established. Property and casualty companies are required by law to

maintain reserves for incurred losses which have not been adjusted as to amount, and reserves for the full pro rata unearned proportion of premiums under unexpired policies. They must also maintain their paid up capital free of all other liability. Most of the policies which they issue run for one year, only; some for three years; and a small proportion for five years. At the expiration of the policy term, the company has no further liability to pay a loss thereunder. At no time is there a certainty that a loss will occur under any of their policies and these companies maintain no reserve for anticipated losses, other than the unearned premium reserve. The capital, and the surplus, of such a company stands as a guarantee that the company can pay its losses if earned premiums are insufficient for the purpose.

Life insurance policies run for long periods of years. If the policy is kept in force the company will certainly have to pay a total loss some day. To cover this future liability, the life insurance company maintains a reserve which, together with future premium receipts, is sufficient to pay the amount of future death claims, with due allowance for the anticipated rate of mortality among its policyholders and the anticipated interest earnings. The lack of necessity for a further guarantee fund in the form of capital stock, in addition to the surplus, is one of the reasons why several large life insurance companies have bought in their outstanding stock, becoming mutual companies, owned and operated by the policyholders for their own account.

Another reason which has actuated the mutualization of life insurance companies is the cumulative value which the insured has in his policy. As previously stated, most casualty and property insurance policies run for a year, none for more than five years. When his policy expires the insured has no further interest in the solvency of his insurance carrier nor in the rates which it charges. He can buy a renewal policy in the open market, without disadvantage because he has changed from one company to another, but the rate for life insurance becomes higher with each added year of the in-

sured's age. He has a continuing and increasing interest in the management and soundness of the company which carries his life insurance.

The factors which govern the rates charged for life insurance are the rate of interest to be earned on premiums and reserves in the hands of the company, the rate of mortality among its policyholders, and the rate of expense for conducting the company's business. This latter is called the "expense loading." All of these factors fluctuate from time to time; interest with investment opportunity and the demand for money; expense with the cost of doing business and with the volume of business transacted; and mortality for a variety of reasons. Operating expense is not much different in life insurance from that in other lines of business, but the rate of mortality is peculiar to life insurance, and interest is a much more important factor because life insurance rates are based, partly, upon the assumption that a stipulated rate of interest will be earned in the future. The rate of mortality is based upon "Mortality Tables" which are the recorded statistics of the number of *"insured"* men of each age who have died in each of the recorded years, and the ratios of these deaths to the number of insured people of each age. U. S. Census Mortality Tables are not used for rate making purposes because they include all people, whether insured or not. Mortality tables are not attempts to fore-tell the future, and they are not infallible. These tables show only the *probabiliy* in the future, if the *experience* of the past is repeated.

The legal reserve of a life insurance company is of the highest importance to everyone of its policyholders. The "Reserve," as it is called, is the real strength of the company, insuring that it will have the money to pay death claims under all of its policies, whether the policy owners die at early ages or live to be ninety-five years old.

The method of determining the amount of loss reserves and unearned premium reserves for property and casualty insurance companies is explained in other chapters. An attempt will be made to

give an equally simple explanation of, (at least an insight into) the calculation of the "Reserve" in life insurance.

Under a policy for a one year term, or for one year renewable term, the reserve is the unearned premium for the portion of the policy term that has not expired when the reserve is calculated.

Under level premium policies the company charges a fixed rate for each $1,000 of insurance and collects the same amount of premium for each year while the policy remains in force. Under a spread of risks, the premiums received in one year, with interest thereon, are more than enough to pay the claims that arise in that year, but the company is still liable to those policyholders who are still living. The rates charged must produce enough premiums, with interest added and expense deducted, to pay total losses under all outstanding policies, provided the policyholders live the spans of life which are anticipated for them, on the average.

Say that a company insures 1000 lives, each 20 years of age, and receives $15,000 in premiums the first year. If the interest earned upon these premiums is $450 (at 3%), the fund is $15,450. Expense of operation will not be considered in this simple illustration. At one time the mortality tables showed that, of 1000 men, insured at age 20, three men might be expected to die in the first year. If the company pays out $3000 for death claims in the first year, it will have a reserve of $12,450 at the end of that year. In the next year the remaining 997 insured men will pay premiums of $14,955; interest on the total of the reserve and the second year premiums at 3 percent will be $822.15; producing a total fund of $28,227.15. If four of the 997 policies in force become death claims in the second year, using up $4000 of the fund, the reserve at the end of the second year will be $24,227.15, which is held for the protection of the 993 living policyholders. Year after year the company collects premiums, earns interest upon its invested funds, pays policy claims and operating expenses, and maintains the reserve for its future obligations. The last of the reserve will be exactly enough to pay the claim for the longest lived of this group of 1000 men, provided the

rate of premium charged was actuarily correct, based upon the rate of mortality and the interest to be earned. The calculation of these rates is one of the responsibilities of actuaries.

Risk is the uncertainty that an event or occurrence will happen, or when it will happen. The risks against which property and casualty insurance are carried involve both uncertainties; whether or not the events will happen, and when they will happen, if ever. The risk in life insurance is the uncertainty only as to when death will come to any one individual.

Relying on probability as it can be reasonably calculated by the law of average based upon sufficient recorded experience, and employing the principle of spread and average of risk, life insurance companies, like those writing other kinds of insurance, have removed most of the uncertainty from their business.

CHAPTER XII

Insurance Survey for Individuals

When our local agent has completed the survey for the firm of Doe & Roe, he consults the partners individually, after obtaining permission to make the same kind of analysis for each of them. Their situations are almost exactly alike. They are within a year of the same age and both are married; each has one child; each owns his own home; and each one has $50,000 invested in the factory. Doe plays week-end golf while Roe fishes and hunts. Both travel with their families when business will permit. Neither has any debts except his share in the $75,000 which they jointly owe to the bank.

Both insurance surveys show the following exposures to loss which can be protected by insurance:

a) A dwelling house, not mortgaged.
b) Household furniture, wearing apparel, jewelry, furs, and sports equipment.
c) One automobile.
d) Personal earnings.
e) Servants.
f) Sports.
g) Responsibility for wife and child, including education for child.

Dwelling—The house can be destroyed or made untenantable by fire or lightning, windstorm, explosion, riot, or falling aircraft, and it will cost money to rent other quarters to house the family while repairs are being made. A fire insurance policy in the amount of the sound value of the dwelling, with an "extended coverage endorsement" attached, will cover against all of these perils to the building, and the agent adds "rental value insurance" to reimburse the owner for the loss of use of his home, and extra expense insurance to cover the added costs of living in temporary quarters while the dwelling is being made tenantable.

Personal Effects—The agent then explains the modern way of insuring the personal property of a private family. At one time three separate policies were needed to cover furniture and other personal effects against fire and burglary loss at the dwelling or away from home. Now these are covered under a "personal property floater." The insured furnishes a schedule of the most valuable pieces of jewelry and fur, and a statement of approximate values for nine other classifications of personal property, such as silverware, linens, rugs, books, paintings, etc. An amount of insurance is included to cover unscheduled items of these kinds, and a further amount is added for small pieces of jewelry, not on the list. Within the limits of the policy, all personal property which a family usually uses is covered against all risks in the home, while travelling, at a summer camp—in fact anywhere it may be.

Automobile—The car owned by each partner has been covered against liability for bodily injury and damage to the property of others, so the agent recommends that these coverages be incorporated in a "standard automobile combination policy," which includes fire and theft, medical payments to persons, including the insured, who may be injured by the use of the automobile, and collision damage to the car, itself.

Earnings—Both partners carry "accident and health insurance." When the agent sees the policies he suggests that they be rewritten on a "waiting period" basis. The premiums will be much lower, and the partners can afford to take the chance that they will be laid up for two weeks without insurance, provided weekly payments from insurance will be received thereafter.

Servants—Each family has a full time house servant and occasionally employs a man to prune shrubbery or do other yard work. "Workmen's compensation" policies, in some states, cover the householder's legal obligation to pay compensation to such employees if they are injured in the course of their employment.

Sports—The agent reminds the partners of the coverage under the comprehensive personal liability policies which were written for

each of them when arranging the insurance at the screen plant. Under those policies this item has been cared for, adequately.

Insurance on the dwelling, the personal liability policy, workmen's compensation, and the personal property floater are subject to substantial savings in premium cost when written for a three year term. The agent makes out a program under which the three year term premium savings are used, but the assured pays approximately one-third of the total each year.

"Now," says the agent, "we come to a subject in which your hearts are involved as well as your business judgment. I mean life insurance. Each of you can protect his wife and child against the possibility that you will be taken away prematurely, and, at the same time, you can be building a retirement fund for your later years, if you are spared. Because you have told me what you own, how much income you have, and what obligations, I am able to select for you the kind of life insurance program best suited to your needs. Life insurance companies issue several kinds of policies. Each one is worth what it costs, and each kind fits somebody's requirement, and is not intended for a person differently situated." The agent then briefly describes the usual forms of life insurance, as follows:

a) Term insurance, which has the lowest premium cost per one thousand dollars. Whether it is written for five years or ten years, when the policy expires it has no paid up insurance value, and no cash surrender value. It is intended to provide funds for temporary obligations, if the insured dies before such obligations have been paid.

b) Ordinary life insurance, under which premiums are paid for the lifetime of the insured. Such policies and some other kinds have a cash surrender value and a loan value. During depression times many policyholders have been able to save their businesses by borrowing upon their accumulated life insurance values.

c) Twenty or thirty payment life. This form of policy provides payment of the premium for a fixed number of years, at the end of

which time the insurance is paid up. It continues in force without further payment until the death of the insured.

d) Endowment policies, under which premiums are payable for a period of years (twenty or thirty). The amount of the policy is payable to the insured, if living, at the end of the period.

e) An Annuity, to pay the insured a monthly income beginning at a certain age and continuing until his death. This is a form of life insurance, because the amount to be paid by the company is governed by the insured's length of life. Annuity contracts may be written to pay the insured during his lifetime, and then to pay a second person (frequently the wife) for his or her further lifetime.

f) Combinations of life insurance and annuity may be purchased from life insurance companies.

Life insurance policies may be endorsed to have the company, upon the death of the insured, pay the principal sum to the beneficiary in equal monthly installments over a period of years.

The agent looks over his next note while the partners make figures for living costs and probable expenses to provide for their dependent families. When each has arrived at the amount of money to provide for his child's education, and to clear up current obligation if he should die, an estimate is made of the monthly income necessary for each family, if the breadwinner is taken away.

The agent then continues, "Life insurance is written by companies organized and operated under two different plans. One is a capital stock company charging a fixed premium, and the other is a mutual company, which belongs to the policy owners. In a mutual company the earnings from underwriting experience, and the excess income from invested assets, are divided among the policy owners by a dividend, which may be deducted each year from the annual premium, or may be left with the company, at interest, to increase the amount to be paid when the insured dies."

CHAPTER XIII

Binders

A POLICY of insurance, like other commercial contracts, is a written record of an agreement between the parties to the contract. The contract is actually made when there is a meeting of minds between the parties, and the terms of that agreement are usually put in writing, for signature by the parties, at a later date. The laws of some states provide that no contract is enforceable unless it is executed in writing within a year of the time when the agreement is reached. Some state laws provide that an oral contract, to be enforceable, must be put in writing, duly executed, if it involves more than a stipulated amount of money.

A contract between an insurance company and a policy buyer is usually made by the insured and the agent of the company agreeing on what is to be covered; for how much; against what perils; from what date; and in what company. The agent's statement that the insurance is in force, made in writing or by word of mouth, is a "binder."

Life insurance is written upon acceptance by the company of an application signed by the insured and the company is not bound until it has issued the policy and received the first premium. Property and casualty insurance companies, on the other hand, have paid thousands of losses, some of them for large amounts, where the insurance had been bound by their representative, but no policy had been issued. Sometimes losses occur only a few hours after the insurance has been ordered by the insured and accepted by the company, or its agent acting for it. Insurance companies, like lawyers, must respect the absolute inviolability of their word, and must recognize liabilities assumed orally as if they had been set forth in a formally executed document.

A valid binder can be made as well over the telephone as in face to face conversation, or by telegraph or letter. Many companies

supply their agents with printed binders to be used unless the policy is to be issued immediately after the insurance is bound. The agent hands one copy of this written binder to the insured; retains one copy for himself; and sends one copy to the company whose policy is to be issued.

Reinsurance between companies is often effected over the telephone, involving, sometimes, millions of dollars of liability. In forty years' experience in the business, the author has never known such a binder to be repudiated.

CHAPTER XIV

Loss Prevention

INSURANCE IS one of the few things we can buy today for less than the price charged before World War I. The average rate for fire insurance is an example. It was $1.14 per $100.00 in 1910 and $.67 in 1945, with the trend still downward. Underwriters generally attribute the reduction in insurance rates to four factors: loss prevention work carried on by insurance companies; cooperation by State and Federal authorities in accident prevention and enforcement of building and electrical codes; improved construction of buildings and machines; and economies in operating costs developed within the insurance buisness.

The companies maintain several national organizations working for the reduction of waste in loss of life, loss of earning power, and destruction of property. It has been found that most of this waste can be prevented by education and insistance upon reasonable safety measures. One authority on the subject has said, "Accidents don't happen. They are caused. Caused by ignorance and carelessness."

When one pays an insurance premium he buys more than protection and the assurance that, if he suffers an insured loss, he will be indemnified. Part of that premium is used to help reduce losses, which in turn permits lower rates for insurance. Over a long span of years this loss prevention work, partly paid for out of insurance premiums, is of more value to the country than the payment of losses. Insurance loss payments cannot bring back lives or arms or legs that have been lost in accidents. Insurance cannot bring back a building that has been burned even though it supplies the money to build a new one. Loss prevention, and disease and accident prevention, help us to preserve our manpower and our ability to produce. They help to conserve our accumulated wealth by preventing its destruction.

This prevention work is carried on principally in four ways:

a) By establishing and publishing safety standards.

b) By inspection to discover if these standards are observed.

c) By education of the public through newspapers, periodicals and pamphlets, and by safety courses taught in schools.

d) By credits in insurance rates to those whose property and operations meet reasonable rules for safety.

The inspectors for casualty and property insurance companies, by their expert recommendations, are responsible for correcting many unsafe practices and for the removal of many hazardous conditions. If the owner carries out these recommendations, he can buy insurance readily and at lower rates.

One study, made under the sponsorship of the Association of Casualty and Surety Companies, which was conducted over a wide and varied field of operations, has made it easier for disabled veterans to obtain employment in industry. Analysis of a great mass of statistics showed that certain kinds of work could be done safely by people with physical impairment. Some jobs could be done better by those with such handicaps.

The National Board of Fire Underwriters, with its experience dating back to 1866 in the field of fire waste and the prevention and fighting of fire, has drafted building codes and standards for electrical installations which have been adopted and are enforced by many cities and towns. The National Board also maintains an arson bureau cooperating with state and municipal authorities in detecting and prosecuting those who are guilty of intentionally setting fire to property.

Each year, in October, the President of the United States proclaims fire prevention week, commemorating the anniversary of the Chicago holocaust, which started on October 9, 1871. The President's message is supplemented by many loss prevention agencies, urging upon our people greater carefulness to reduce the horrible loss of life and property values caused by needless fires.

The Underwriters Laboratories, Inc., in Chicago, was started by fire insurance companies to test materials, types of construction, and many kinds of electrical and mechanical devices. Their equipment and machines are not excelled anywhere in the world for testing load and strain bearing strength and resistance to extreme heat. These tests are paid for by the manufacturer and, when the laboratories find a product to be safe for use, they authorize the maker to attach the Underwriters Laboratory label. This label, which may be found on many articles, including some for household use, is a safeguard for the purchaser. The insurance companies no longer receive any profit from the operation of the laboratories, as they were dedicated several years ago to the service of the public in the work of safety and loss prevention.

Group accident and health, and group annuities or pension plans, have contributed to better health, shorter periods of disability, and longer life for those who participate in such plans. Many employees, whose doctor and hospital bills are guaranteed, now receive more prompt and better medical care when they become ill, or when they are injured. Employees who have no fear of penniless old age worry less, and live longer.

Many "accidents" do not occur because they are prevented. Among the hundreds of thousands of elevators and boilers in operation in this country alone, how seldom one hears of an elevator failure or the explosion of a boiler. The reason is the expert inspections which are made regularly by insurance company inspectors. Elevator cables and machinery and boilers wear out, but unsafe conditions are detected by periodic inspection, and the equipment is repaired or replaced, sometimes because the owner cannot be insured until the inspector's recommendations are carried out.

Insurance companies belong to and cooperate with many national organizations engaged in safety work. Among these are the National Safety Council, American Society of Safety Engineers, Life Extension Institute, International Association of Industrial Accident Boards and Commissions, and American Museum of Safety.

CHAPTER XV

Federal and State Regulations and Supervision

It has been said that an insurance company has about as much privacy as a goldfish. All of its operations are shown in great detail in its annual statement which must be filed with every state in which it is licensed to do business. These statements are open to examination by the public, and, in addition, companies are audited about every three years by state examiners who go into all of the company's transactions for the period under review.

Prior to 1849 in the United States, insurance companies fixed their own rules of operation, drafted their own policy conditions and made their own rates, without any supervision or regulation by governmental authorities. The first general insurance law was passed in New York State in 1849, but an insurance department in that state to supervise insurance companies was not established until ten years later. In 1855 Massachusetts established the first state insurance department. Several other states had formed such by 1871 and a convention of insurance commissioners was held in New York City in that year.

There was great diversity among the companies in the provisions and in the language of life and fire insurance policies—the kinds of insurance most widely purchased by the public—because each company wrote its own contracts. A standard wording for fire insurance policies was adopted by the Massachusetts legislature in 1873, but the standard which was most widely accepted was the 1886 form adopted by New York State. This was twice amended before 1943 when the present New York Standard Fire Insurance Policy was passed in Albany, which has since been adopted by thirty-eight other states. The earliest Standard Life Insurance Policy was the one adopted in New York State in 1909. Where statutory policies and policy conditions have been adopted by the legislatures, it is not lawful to use any other language.

Gradually the states have assumed jurisdiction over the rates charged for fire insurance, then for casualty insurance and suretyship, and later for inland marine insurance. In a previous chapter we saw why they do not, and should not, regulate rates for marine insurance.

The insurance business is regulated, supervised and taxed by the several states, and prior to 1944 there was no regulation of the business by the Federal Government. Since 1868, when the Supreme Court handed down its decision in the case of Paul vs. Virginia declaring that insurance is not commerce, the Federal laws governing commerce had not applied to insurance. Many suits were brought to upset that decision but each time the Supreme Court sustained the Paul vs. Virginia decision. On June 5, 1944, in the case of South Eastern Underwriters Association, the Supreme Court declared insurance to be commerce, and when transacted across state lines, to be interstate commerce.

This decision made the business subject to many Federal laws affecting commerce, of which it may be said that the principle one is the Sherman Act. This decision also cast doubt upon the rights of the states to regulate insurance and to levy taxes upon insurance premiums. Representatives of some twenty-six states joined with insurance company administrators in an appeal to Congress to pass a law that would preserve states' rights in this matter. Under the McCarran Act, known also as Public Law 15, passed by the Federal Congress in March, 1945, the business and the states were given a breathing spell until July 1, 1948, to accommodate themselves to the new status of insurance as commerce.

Two uniform laws were drafted after many conferences, one for fire and allied lines, including inland marine, and one for casualty lines. The casualty bill has been adopted with little change by many states. In most other states laws calculated to accomplish the same purpose have been passed. Every state has a law to regulate fire insurance. These statutes now place upon the state governments the obligation to regulate the business of insurance in all its opera-

tions. Marine insurance is not included in these laws. Under the Jones Act, passed in 1920, marine insurance is made not subject to the Federal anti-trust laws.

It may be several years before there are enough high court decisions to determine how much and in what manner the insurance business is affected by the Federal Trade Commission Act and the Robinson-Patman Act—two Federal statutes regulating commerce—but we now know some of the changes imposed upon the business by the Sherman anti-trust law and the Clayton Act.

Companies in several branches of insurance have ,for many years, maintained underwriting and rating organizations where the total premiums and losses of all the member companiees were tabulated by classes of risk and again by states. Based on this combined experience, the organizations, such as South-Eastern Underwriters Association, made and published rates which the member companies were obligated to observe. Company organizations and bureaus drafted policy forms, and calculated the rates of agency commission which they believed could properly be paid out of the rates charged. The member companies were committed to use these forms and to pay not more than these commissions.

Under the American Agency System ,which is peculiar to the United States, local agents usually represent more than one company to write fire insurance and sometimes casualty insurance. Some agents who represented two or more companies charging the same rates of premium but paying different scales of agency commission, could be expected to place their more desirable risks with the company which paid the highest commissions. Other companies in the agency would, therefore, receive only the less desirable business. To prevent this unequal participation in the business from an agency, associations like the S. E. U. A., Western Underwriters Association, and Eastern Underwriters Association had rules requiring a member to withdraw from an agency which took the representation of a company not a member of the association.

These two practices—enforcement of uniform rates, policy cov-

erage, and agent's commissions, and "separation" in agencies from companies which were not pledged to such uniformity—were intended to preserve the solvency of insurance companies and to prevent unfair discrimination between policyholders, but they could be made effective only if a majority of companies acted in concert by agreeing with each other to observe uniform rules.

Under the Federal laws regulating commerce (insurance is now commerce), two or more persons or companies may not combine to agree upon practices or prices to restrain trade or to limit free competition. Under Public Law 15 (the McCarran Act) the provisions of the Sherman anti-trust law apply to any acts or agreements of "boycott, coercion or intimidation." These legal restrictions prevent insurance companies from combining to charge uniform rates and from agreeing to withdraw from any agency. Each company may lawfully decide for itself what rates it will charge and must, of course, comply with state laws which fix rates. Each company may decide for itself whether or not it will be represented by any certain agent, but it may not agree with some other company that both will withdraw unless the agent does certain things. Such an agreement would involve "boycott, coercion and intimidation."

Under the McCarran Act certain Federal laws apply to the business of insurance "to the extent that such business is NOT regulated by State law." As previously stated, every state has now passed a law to regulate insurance, and we have already seen how rates are calculated by the company organization and filed with the state. To become legal these rates must have the approval of the supervisory authority.

Most of the States prescribe the language of certain kinds of policies and require that amendatory forms and riders be filed with, and approved by, the State insurance department before they may be used as endorsements on such policies. Nearly all States fix the minimum amount of paid up capital which a company must have for the incorporation or licensing of an insurance company. In the State of New York, for example, a company must have, and main-

tain, $250,000 of paid up capital to write fire insurance. Such company must have $250,000 of additional paid up capital to add marine insurance to its writing powers. A casualty company is required to have, and maintain, $250,000 of capital to write Workmen's Compensation insurance, and $200,000 more if it wishes to write burglary insurance, also. Various amounts of capital are required for a license to write each of the several kinds into which insurance is divided in the law. The law, also, prescribes the minimum amount of surplus to be maintained by a company which charges an advance premium, and how much surplus, free of all other liabilities, a mutual company must have, according to the kinds of insurance that it writes.

All of the states impose taxes upon insurance premiums, except that the state taxes upon marine insurance are levied upon profit, according to a fixed formula, and not directly upon the amount of premiums written. These insurance taxes constitute an important item of state revenue. Theoretically the tax is collected to pay for the cost of state supervision of the business, in the interest of the insuring public, but actually less than five percent of all such taxes is spent for that purpose. The balance goes into the state's general fund.

CHAPTER XVI

Investments and Investment Income

Financial officers of an insurance company are always conscious of their duty to keep the company solvent for the discharge of its policy liabilities and obligations. The investments which they select must, first, offer reasonable assurance that they can be sold for enough to return the amount invested in them. The expression "reasonable assurance" is used because there can never be absolute certainty that the market value of a security will not go up or down. This assurance weighs heavier in the balance than dividends and interest to be expected, although it is necessary that these companies earn a fair return upon the funds in their hands.

State laws impose restrictions upon the kinds of investments that may be made by insurance companies, but these laws by no means prescribe a pattern which a company may follow safely and profitably. The burden of finding sound investments, not prohibited by law, falls upon the financial departments of the companies.

Mutual companies, having no stockholders to which to pay dividends, are anxious, nevertheless, to augment their underwriting gain from insurance operations by so much investment income as they can safely earn. Better than average underwriting profit and investment income permits the company to charge insurance rates lower than those of its competitors.

Capital stock insurance companies customarily pay all dividends to stockholders out of the investment income of the company. Usually, when underwriting profits are made from insurance they are added to the company's surplus for the further protection of policyholders.

In their financial departments, as in underwriting, these companies keep the interest of the public foremost in mind in every decision which they make. Examine the financial statement of any successful insurance company and you will find that an amount

equal to, or greater than, the reserve maintained for the policy owners is always invested in securities of the very highest grade of dependability. If the worst possible catastrophe should compel the company to exhaust its surplus, and even to use up all of its capital, it would be obliged to suspend operations, and the stockholders would lose their holdings in the company, but the policyholders would still be protected. The reserve for unearned premiums, invested in securities of the highest grade, would be intact, and would furnish the premium to reinsure the policy obligations in a solvent company.

Usually the greater the degree of security for the invested capital, the lower is the rate of interest or dividend paid. Where there is considerable risk that the capital investment will shrink or be lost entirely, an investor demands a high rate of return. As in insurance, the rate must be commensurate with the degree of risk involved in the venture. Insurance companies cannot afford to risk their funds in the kinds of investments that pay high dividends. Furthermore, every purchase of securities must be considered in the light of the taxes to be paid upon the income from such investment. Bond interest is taxed by the Federal government at a higher rate than dividends on stocks. When a high grade preferred stock and a bond are being considered for purchase, both paying about the same rate of return, the preferred stock may be chosen because the net income after taxes will be greater than that realized from the bond.

A list of all of the securities and property in which an insurance company has invested its funds is known as its "investment portfolio." These portfolios are carefully scanned by the thousands of people who buy insurance company stocks. Investment trusts frequently buy and hold large blocks of stock in well managed insurance companies because they recognize the soundness of the investments and the caution which governs the insurance company in every new purchase which it makes. This dependability of insurance company investment policy is so well known that it is often said in financial circles that a successful insurance company is an invest-

ment trust with the added advantage of probable underwriting earnings from insurance operation.

Many of the services and facilities which underlie our standard of living in this country must look for their financing to an investment market that is content with a modest return upon capital, provided that capital is reasonably safe. The railroads and other public utilities, and the large housing projects, are necessary to the public welfare, but they have not been able for many years past to pay dividends at the rates which are paid by some types of industry and commerce. Much of the capital needed to operate them has been furnished by insurance companies.

Many life insurance companies lend money secured by real estate mortgages, but this practice is not common today among property and casualty insurance companies, and few of the latter own much real estate except the properties which they occupy for their own business operations.

The shares of insurance company capital stock are sometimes listed at their book value, liquidating value, and market value. Book value is the combined capital and surplus of the company divided by the number of shares owned by stockholders. If the company were to liquidate it would reinsure its business in force and pay its unearned premium reserve to another insurance company to assure the policy liabilities. The commission which the liquidating company would receive on the reinsurance is its equity in the unearned premium reserve. Adding this commission to the combined capital and surplus and dividing by the number of outstanding shares produces the liquidating value per share. Market value is the cash price to be obtained by selling the stock on a given day. Two prices are quoted, usually—bid and asked. When one is selling stock he can get what a prospective purchaser bids for it, and when one is buying the cost will be the price asked by a stockholder who is willing to sell.

The rate of dividend paid on its capital stock by an insurance company is not a measure, nor even an indication, of the profit

that it may be making in the insurance business. A company may have $5,000,000 capital outstanding, consisting of 500,000 shares with a par value of $10.00 per share. Its surplus may be $20,000,000, part of which was paid in by stockholders who paid a premium when purchasing their stock, and the balance of which has been accumulated over eighty or even a hundred years of operation. If the company is writing and earning $20,000,000 in premiums annually the unearned premium reserve is probably about that same amount. So the company receives income from the investment of its capital, surplus and reserves, including the premium reserve. At 3% return the investment income on $45,000,000 will be $1,350,000 per year. By using about 80% of this for dividends to stockholders the company can pay a 20% dividend on its $5,000,000 capital, and still add $350,000 each year to the surplus.

A fire insurance company, for example, does well if it makes 2¼% underwriting profit upon the total volume of premiums earned. This would produce only $450,000 a year on $20,000,000 of premiums, but, since underwriting gain is rarely used for dividends to stockholders, that sum, also, is added to surplus.

The management of an insurance company's investment portfolio requires a knowledge of the entire field of investment opportunity, with special training in those particular securities best adapted for constant dependability. Only by daily study can the financial officer know which investments to buy; which to hold; and which to sell.

CHAPTER XVII

Multiple Line Underwriting Powers

THROUGHOUT THE previous chapters frequent reference has been made to the fact that in most of our states an insurance company may be chartered to write only certain specified kinds of insurance. In this chapter differentiation is made between alien, foreign, and domestic companies. In the state in which a company is chartered it is called a domestic company, and in that state all companies chartered in other states of the United States are called foreign companies. Such foreign companies must be licensed in each State in which they operate. An alien company holds its grant or charter from some foreign country and it must be licensed by each state in which it does business.

Until very recently the Insurance Laws of most of the various states authorized the incorporation of an insurance company to write (a) life and accident insurance and annuities, or (b) fire and marine insurance, or (c) casualty insurance and surety bonds. In such states no company could be chartered or licensed to write two or more of the above listed types of insurance.

Early in the history of the business, companies in England wrote only one or two kinds of insurance but now many alien insurance companies write all kinds, including life. The Charter of the Insurance Company of North America, granted by the General Assembly of Pennsylvania in 1794, authorized that company to write fire, marine and life insurance. At that time casualty insurance was unknown to the business world. The company voluntarily closed its life insurance department in the early years of the 19th century.

In the last few years laws authorizing the incorporation of insurance companies to write fire, marine and casualty insurance have been enacted by thirty-three jurisdictions, including the District of Columbia, Hawaii and Puerto Rico. In six other states the insurance commissioner has ruled that the current laws thereof permit

multiple line underwriting. Other states have extended the underwriting powers of companies beyond the restrictive authority conferred by their original charters. In New York underwriting authority has been extended by statute so that a domestic fire and marine or casualty company may write all lines of insurance except life outside the United States, and may reinsure all such lines either within or without this country. The policy of New York, maintained for many years, is to decline to license a foreign company to do business in that state if it writes in other states any kind or kinds of insurance which, in New York, a domestic company may not be chartered to write.

While this manuscript was being prepared the State of New York, by the passage of Chapter 645, Laws of 1949, permitted multiple line writing powers.

The laws of those states which have enlarged the underwriting powers of companies, require increased financial strength for such additional classes of insurance as a company may desire to write. Many companies now have a paid up capital sufficient to meet the statutory requirements for companies desiring to go into the multiple line field.

In a number of instances a fire insurance company owns all of the stock of a casualty company and combines as many of the operations of the two corporations as the laws now permit. In such cases the entire capital and surplus of the wholly owned casualty company is included in the surplus of the fire company. Therefore, the surplus to policyholders (combined capital and surplus) of the fire company is constantly subject to the risks of casualty insurance written by its subsidiary.

Marine insurance, which may be included in the charter powers of a fire insurance company, includes protection and indemnity insurance, which covers casualty perils. Fire and marine companies also write compensation insurance on longshoremen and dock workers.

Reasonably the buyer of insurance wants his insurable risks adequately covered by as few policies as possible. If he could buy all of his insurance from one company there would be less chance of gaps in the coverage between the several kinds of protection which he needs. Absence of loss under most of his policies would build a credit balance with the company to offset a bad loss under one policy.

For a number of reasons life insurance probably should not be combined with other kinds in the writing powers of one company. In life insurance the experience cycles are much longer than in fire, marine, or casualty; the rates are predicated upon a wholly different basis; interest earnings on investments enter into the calculation of policy reserves and rates; and, lastly, life companies insure against a contingency which is certain to occur sometime.

As American business spreads into foreign countries it must compete with the institutions of those countries. American business men want insurance in American companies to follow their ventures into fields abroad, but they want it written as simply and with as few artificial restrictions as are to be found in the policies from insurance companies of other countries.

Where an insurance company has sufficient capital, or other guarantee fund, to cover the combined financial requirements in order to write fire, marine and casualty insurance, including surety bonds, a law giving such a company broad powers does not endanger the interest of the policyholders. Such a law benefits the insurance buying public, the agents and the companies. Management economies which the companies cannot effect today can be accomplished under the exercise of multiple line writing powers.

The passage of laws to permit insurance companies to so broaden their charters as to include all kinds of insurance except life and annuities, will not compel any company to make such an amendment to its writing powers. Even though it may adopt such a broadened charter no company would be compelled to write all the kinds of insurance which it would then have permission to write. Each

company may still exercise its judgment as to how much of its charter powers shall be used. Having multiple line *powers* the company may decide not to engage in multiple line *underwriting.*

Some changes in procedure for examination and supervision by the states would be necessary at the outset, but it seems improbable that the operation of the several kinds of insurance conducted by one company would be harder to supervise than the same operations conducted by two different companies.

As these broader powers are permitted by law, it becomes more important than ever that men and women in the business be familiar with the function and the operation of all of the kinds of insurance.

Date Due

Due	Returned	Due	Returned
DEC 7 1957	NOV 13 '63		
NOV 13 '63 ML			
NOV 27 '63 ML	NOV 17 '63